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International Specialists in the Environment

SUPERFUND BRANCH

M-ROS, SA VOREL-1

MEMORANDUM

TO:

Ed Sierra, Region VI RPO

THRU:

K. H. Malone, Jr., FITOM Wham

FROM:

Raymond Wayne, FIT Hydrologist

DATE:

May 24, 1989

TDD: F06-8901-29

PAN: FTX0777PAA

SUBJECT:

Preliminary Assessment of the AID Warehouse Site

Houston, Harris County, TX (TXD987966066)

I. Site Information

The FIT was tasked to perform a Preliminary Assessment (PA) of the A International Distribution (AID) Warehouse site at 7198 Mykawa Road, Houston, Texas (Figure 1) (Reference 4, p. 1). Site coordinates are latitude 29°40′27" north and longitude 95°19′17" west (Reference 7). The warehouse is located in a predominantly residential area, approximately three miles northwest of William P. Hobby Airport (Reference 1; Reference 4, p. 1).

The AID Warehouse is currently known as International Distribution Company (IDC) (Reference 3, p. 1). The date and circumstance of the name change are not known. Mr. Doug Walt is its president (Reference 4, Page 2). IDC rents and operates the facility, and the Trammel Crow Company of Houston manages the property for New England Mutual Life Insurance Company, which purchased a 40 percent share of the facility from George A. Shutt in 1979, and the remaining 60 percent from Mykawa Road Houston B. V. in 1986 (Reference 3, p. 2, Deeds).

II. Background/Operating History

A. Site History

The site is an active warehouse which employs approximately 20 workers (Reference 24). Conservation Services, Inc. and its sister company SIGNO, placed 127 overpacked drums of chemicals into the AID Warehouse in March, 1986. CSI and SIGNO shipped 31 of the 127 drums to Oregon

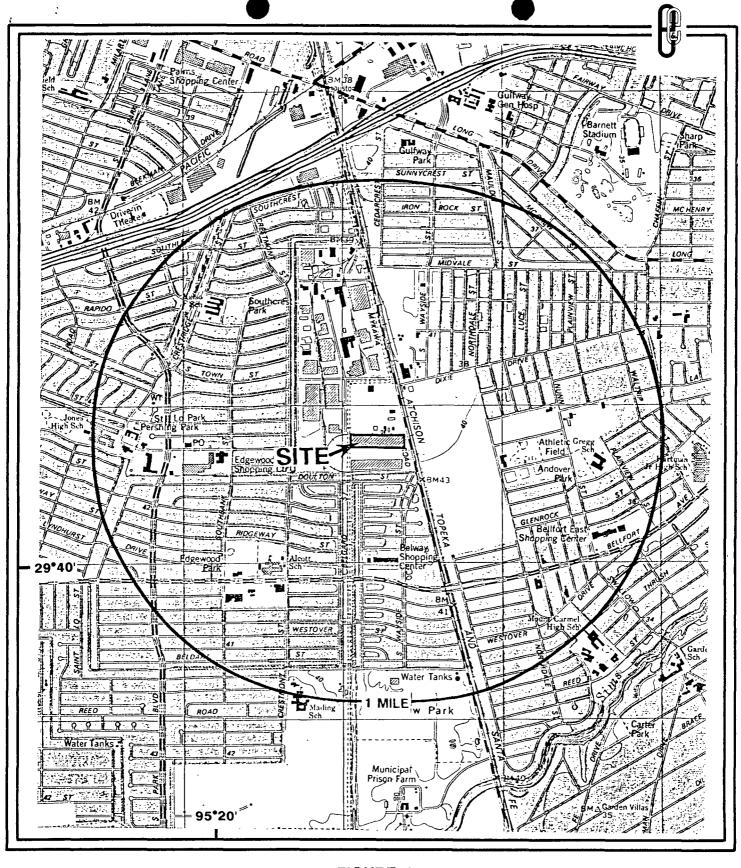
PREDMINARY REPORT
This does not constitute
final opinion of EPA

Reviewed by 64-E84

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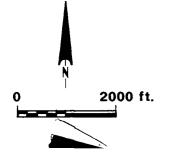


FIGURE 1
SITE LOCATION MAP
AID WAREHOUSE
HOUSTON, TEXAS
TXD987966066

California Chemicals and abandoned 91 drums at the warehouse (Reference 4, p. 1). The disposition of the remaining five drums has not been determined. CSI and SIGNO are both defunct (Reference 4, p. 2).

B. Discussion of Known/Potential Problem(s)

AID Warehouse contacted the Texas Water Commission (TWC) for assistance in removing the abandoned drums. The TWC referred AID to the EPA Region VI Emergency Response Branch (ERB) (Reference 4, p. 1). The EPA Technical Assistance Team (TAT) inspected the site on May 19, 1988 (Reference 3, p. 2). Based on the results of the investigation, the EPA issued an Administrative Order on June 22, 1988 requiring AID to remove the drums (Reference 4, pp. 1 and 2).

On November 16, 1988, under supervision of the ERB, 84 drums of hazardous chemicals were overpacked and shipped to disposal facilities and 7 drums containing ORZAN-A were disposed as non-hazardous (Reference 4, p. 2). The removal met the EPA criteria established in the Administrative Order (Reference 4, p. 3).

C. Regulatory Involvement

There are no records by other regulatory agencies of waste related incidents involving AID Warehouse (References 5 through 10).

III. Waste Containment/Hazardous Substance Identification

The drum labels on the 91 abandoned drums indicated that the drums contained pesticides and pesticide formulation products (Reference 3, p. 2). Seven drums labeled DDT were sampled by the Texas Department of Agriculture. Analytical results revealed that these drums contained ORZAN-A, rather than DDT (Reference 4, pp. 1 and 2).

The physical conditions of 88 of the 91 drums were characterized by the TAT as good or fair. Three of the 91 drums were characterized as poor, because one, which contained poison, had a corrosion hole in its lid; a second drum, which contained diethyl sulfate, was rusted and corroded; and a third, which contained toxaphene, had a dented overpack lid (Reference 3, Field Log).

The Organic Vapor Analyzer (OVA) was used to measure air quality in the warehouse. Elevated levels of volatile organics were recorded directly above the tops of several drums, and background levels in the walking areas (aisles) (Reference 3, Field Log). The OVA measured 200 to 500 parts per million (ppm) over several drums labeled benzene, 10 ppm over one drum labeled diethyl sulfate, 10 ppm over one drum labeled ORZAN-A, 100 ppm over one drum labeled isobutyronitrile, and 3 ppm over one drum labeled boiler water (Reference 3, p. 2).

There were no reports or indications that the drums had spilled while on-site (Reference 4, p. 2; Reference 11, p. 1; Reference 12). The drums were located in a fully enclosed building (Figure 2) with a concrete floor (Reference 12).

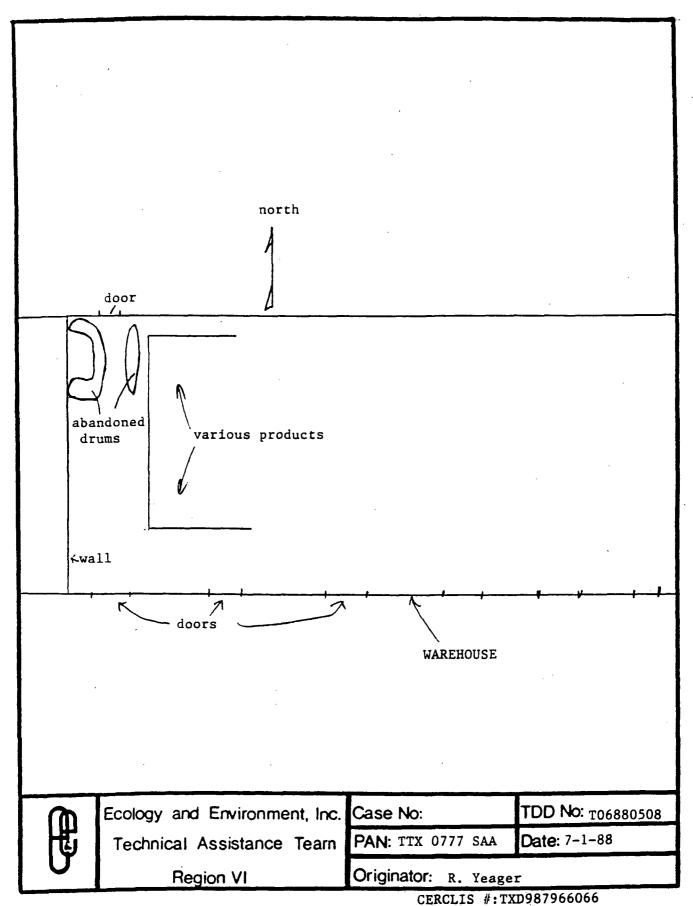


FIGURE 2 SITE SKETCH I.D.C. WAREHOUSE

(not to scale)

IV. Pathway Characteristics

A. Air Pathway Characteristics

There is no air route pathway under current site conditions. All hazardous waste was removed from the site (Reference 4, p. 3).

B. Ground Water Characteristics

The Chicot aquifer underlies the site, at a depth ranging from 175 to 200 feet. The Chicot is a water table aquifer comprised of approximately 500 feet of interbedded sand and clay. The hydraulic conductivity ranges from 10^{-3} to 10^{-2} cm/sec. The ground water flow direction near the site has not been determined (Reference 19).

In the unsaturated zone, the Beaumont Clay comprises the uppermost 15 to 20 feet. More than half of the unsaturated zone is comprised of clay, and because of this and the presence of the Beaumont Clay, the area surrounding the site is not a recharge zone for the Chicot (Reference 19). The net precipitation of the site is minus 6.7 inches (Reference 20, Figures 4 and 5).

The Chicot is hydrologically connected to the underlying Evangeline Aquifer. The Evangeline, approximately 1,500 feet thick, is comprised of sands and clays, and has a hydraulic conductivity of approximately 10^{-3} cm/sec. There are no known discontinuities in either the Chicot or Evangeline aquifers within four miles of the site (Reference 19).

C. Surface Water Characteristics

Runoff is generated from the approximately 115 acres which contain the site. The runoff area is bounded by a dirt road on the north and west and paved roads on the south and east (Reference 1). The 2-year, 24-hour rainfall is five inches (Reference 27). The 91 abandoned drums were not subjected to rainfall or runoff (Reference 12).

Based upon the topographic map (Reference 1), site runoff is likely to flow into an unnamed intermittent ditch south of the site. The runoff flows southerly in the ditch and discharges into Sims Bayou, approximately 1.6 downstream miles from the site. The Sims Bayou flows northeast and discharges into Buffalo Bayou, approximately 11.5 downstream miles from the site. The runoff flows east in Buffalo Bayou for the remainder of the 15 downstream miles (Reference 1). In Water Year 1987, the mean daily flow of Sims Bayou was 168 cubic feet per second (cfs) and Buffalo Bayou 390 cfs, when measured at the stream gauging stations closest to the site (Reference 14).

D. On-Site Pathway Characteristics

There is no on-site exposure route under current site conditions. All hazardous waste was removed from the site (Reference 4, p. 3).

V. Targets

A. Air

The target population for the air pathway consists of the approximately 20 on-site employees and the approximately 212,500 residents within four miles of AID (Reference 2; Reference 24). The additional employed population, and the number of people attending institutions within four miles of the site, have not been determined.

Land within four miles of the site is utilized primarily for single family residences, but commercial, industrial and institutional usage is also represented (Reference 1; Reference 25). With the possible exception of small areas in which cattle graze, there is no agricultural land use within four miles of the site (Reference 18). There are no known sensitive environments within four miles of the site (Reference 13).

B. Ground Water

The City of Houston pumps seven drinking water supply wells within four miles of the site. The nearest municipal well (South Park #5) is less than one mile south of the site and is screened 795 feet below land surface. The city's Bellfort well has the most shallow screened depth (655 feet) and is located approximately three miles west of the site (Reference 1; Reference 17). The seven municipal wells are screened in the Evangeline aguifer (Reference 17; Reference 19).

The municipal wells are interconnected to the city water supply system (Reference 17). The city water distribution system provides drinking water to the entire area within four miles of the site and approximately 380,000 active connections system-wide (Reference 16). There are no known irrigation or domestic drinking water wells within four miles of the site (Reference 17).

C. Surface Water

There are no drinking water extraction points within 15 downstream miles of the site. The only extraction is for industrial use. Houston Power and Light (Deep Water Plant) extracts water from Buffalo Bayou, approximately 12.5 downstream miles from the site. Houston Power uses the surface water for cooling purposes during power generation (Reference 15). There are no recreational structures or uses for 15 downstream miles from the site (Reference 22; Reference 23). There are no agricultural or aquacultural uses of the runoff pathway (Reference 18). Sensitive environments may be located within 15 downstream miles of the site, but there are no critical habitats for federally listed endangered species (Reference 13).

D. On-Site

AID Warehouse is an active facility which employs 20 workers (Reference 12; Reference 24). It does not have an on-site, residential population,

but there are approximately 21,000 residents within one mile of the site (Reference 2). The number of people working or attending institutions within one mile of the site has not been determined.

VI. Conclusions

Beginning in March 1986, AID Warehouse stored 127 drums of chemicals for CSI and SIGNO. When CSI and SIGNO went out of business, they abandoned the 91 drums remaining in the warehouse. The chemicals contained in the drums included pesticide related compounds. The EPA Emergency Response Branch inspected the site and EPA issued an Administrative Order requiring the AID Warehouse to properly dispose the abandoned drums. On November 16, 1988, AID Warehouse disposed the 91 abandoned drums in compliance with EPA criteria.

There is no documentation to suggest that hazardous substances remain on-site or have migrated from the site.

INTEROFFICE MEMORANDUM

TO: File

THRU: K. H. Malone, Jr., FITOM Man

FROM: Raymond Wayne, FIT Hydrologist

DATE: May 22, 1989

SUBJECT: PreScore Rationale for the AID Warehouse Site, Houston, TX

(TXD987966066) TDD: F06-8901-29 PAN: FTX0777PAA

There are no data gaps for this Preliminary Assessment which would significantly change the HRS score. The preliminary and projected scores were identical.

- 1 Both the air route and on-site exposure route pathways received a score of zero because all hazardous waste has been removed from the site.
- 2 The surface water runoff pathway received a score of zero because there is no target population usage of this pathway.
- 3 No analytical evidence was found that indicated a release of hazardous substances to surface water.

DECLASSIFIED Date: Phillips on the control of the

Site Name: AID Warehouse
EPA ID No: TXD987966066
TDD No: F06-8901-29
City: Houston

County: Harris

State: Texas

Site Evaluator: Raymond Wayne RW

Region VI FIT Hydrologist

Date:

April 20, 1989

CENTER

DEC 24 1991

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POTENTIAL RELEASES

[X] Ground Water
[] Surface Water
[] Air
[] On-Site/Direct Contact

Preliminary	Projected
5.72	5.72
0.00	0.00
0.00	0.00
3.31	3.31
	0.00

NEW HRS MODEL CONSIDERATIONS

GROUND WATER ROUTE: No significant scoring differences.

SURFACE WATER ROUTE: No significant scoring differences.

AIR ROUTE: Not applicable because all hazardous waste has been removed.

ON-SITE ROUTE: Not applicable because all hazardous waste has been removed.

*****CONFIDENTIAL*****PRE-DECISIONAL DOCUMENT***** ***** GROUND WATER_ROUTE WORKSHEET ___*****

		Preliminary	Reference	Projected	Reference
1.	OBSERVED RELEASE	0		0	
2.	ROUTE CHARACTERISTICS				
	DEPTH TO AQUIFER OF				
	CONCERN (x2)	0	19	0	19
	NET PRECIPITATION	1	1, 20	1	1, 20
	PERMEABILITY OF UNSATURATED ZONE	0	19, 20	0	19, 20
	PHYSICAL STATE	3	3	3	3
	ROUTE CHARACTERISTIC SCORE	4		4	
3.	CONTAINMENT	1	3, 11, 12, 20	1	3, 11, 12
4.	WASTE CHARACTERISTICS				
	TOXICITY/PERSISTENCE	18	3, 21	18	3, 21
	HAZARDOUS WASTE QUANTITY	2	4	2	4
	WASTE CHARACTERISTICS SCORE =	20		20	
5.	TARGETS GROUNDWATER USE (x3)	6	16, 17	6	16, 17
	DISTANCE TO NEAREST WELL/POPULATION SERVED	35	16, 17	35	16, 17
	TOTAL TARGET SCORE =	41		41	
(1	(2x3x4x5) =	3280	·	3280	
	GROUNDWATER ROUTE SCORE				
	(1x4x5) or $(2x3x4x5)$ x 57,330	100 = 5.72		5.72	

****** SURFACE WATER ROUTE WORKSHEET *****

•		Preliminary	Reference	Projected	Reference
1.	OBSERVED RELEASE	0	Memo 3	0	Memo 3
2.	ROUTE CHARACTERISTICS				
	FACILITY SLOPE AND INTERVENING TERRAIN	0	1	0	1
	1-YEAR 24-HOUR RAINFALL	3	20, Fig. 8	3	20, Fig. 8
	DISTANCE TO NEAREST SURFACE WATER (x2)	2	1.	2	. 1
	PHYSICAL STATE	3	3	3	3
	ROUTE CHARACTERISTIC SCORE	8		8	-
3.	CONTAINMENT	1	3, 11, 12, 20, Table 9	1	3, 11, 12 20, Table 9
4.	WASTE CHARACTERISTICS				
	TOXICITY/PERSISTENCE	18	3, 21	18	3, 21
	HAZARDOUS WASTE QUANTITY	2	4	2	4
	WASTE CHARACTERISTICS SCORE =	20		20	
5.	TARGETS SURFACE WATER USE (x3)	0	15, 18, 22, 23, Memo 2	0	15, 18, 22, 23 Memo 2
	DISTANCE TO A SENSITIVE ENVIRONMENT (x2)	0	. 1	0	1
,	POPULATION SERVED/ DISTANCE TO DOWNSTREA WATER INTAKE	M 0	1, 15	0	1, 15
	TOTAL TARGET SCORE =	0		0	· · · · · · · · · · · · · · · · · · ·
	(1x4x5) or $(2x3x4x5) =$	0		0	
	SURFACE WATER ROUTE SCORE =				
	$(\frac{1x4x5) \text{ or } (2x3x4x5)}{64,350}$ x	100 =		0	

*****CONFIDENTIAL*****PRE-DECISIONAL DOCUMENT***

***** AIR ROUTE WORKSHEET ****

	Preliminary	Reference	Projected	Reference
1. OBSERVED RELEASE	0	Memo 1	0	Memo 1
DATE AND LOCATION				
2. WASTE CHARACTERISTICS				
REACTIVITY AND INCOMPATIBILITY	2	3, 26	2	3, 26
TOXICITY (x3)	9	3, 21	9	3, 21
HAZARDOUS WASTE QUANTITY	2	4	2	4
WASTE CHARACTERISTICS SCORE =	13		13	
3. TARGETS				
POPULATION WITHIN FOUR MILES	24	2	24	2
DISTANCE TO SENSITIVE ENVIRONMENT (x2)	0	1	0	1
LAND USE	3	12	3	12
TOTAL TARGET SCORE =	27		27	-
(1x2x3) =	= 0		0	
AIR ROUTE SCORE				
$(\frac{1 \times 2 \times 3}{35,100}) \times 100$	= 0		. 0	

Preliminary S_m WORKSHEET

	S	s ²
Groundwater Route Score (Sgw)	5.72	32.72
Surface Water Route Score (Ssw)	0.00	0.00
Air Route Score (Sa)	0.00	0.00
$Sgw^2 + Ssw^2 + Sa^2$		32.72
$(Sgw^2 + Ssw^2 + Sa^2)$		5.72
$(Sgw^2 + Ssw^2 + Sa^2)^{1/2} / 1.73 = S_M =$		3.31

Projected C UNDVCUPPT

Projected S_m WORKSHEET

	S	s ²
Groundwater Route Score (Sgw)	5.72	32.72
Surface Water Route Score (Ssw)	0.00	0.00
Air Route Score (Sa)	0.00	0.00
$Sgw^2 + Ssw^2 + Sa^2$		32.72
$(\operatorname{Sgw}^2 + \operatorname{Ssw}^2 + \operatorname{Sa}^2)$		5.72
$(Sgw^2 + Ssw^2 + Sa^2)^{1/2}$ /1.73 = S_M =		3.31

AID WAREHOUSE Preliminary Assessment References

Reference

Number Description of the Reference

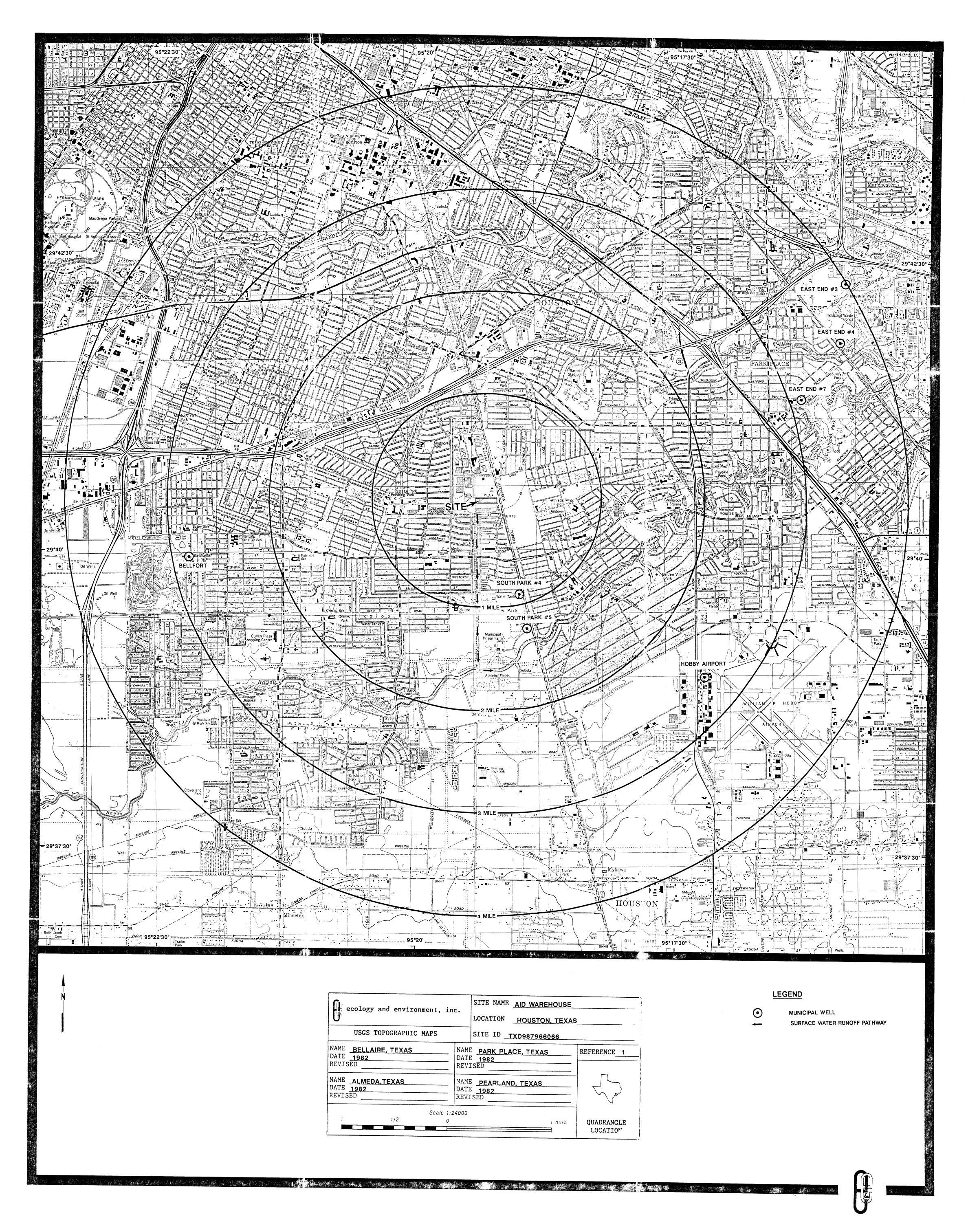
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- 5 ROC. To: Antonio Amors, Environmental Specialist, Houston Health Department, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 13, 1989.
- ROC. To: Jay Swindle, Engineer, Solid and Hazardous Waste Section, Houston Health Department, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 9, 1989.
- 7 ROC. To: Jim Taylor, Engineer, Harris County Pollution Control Department, Pasadena, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 9, 1989.
- 8 ROC. To: Susan Ripley, Field Investigator, Hazardous Waste Section, Texas Water Commission, Deer Park, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 9, 1989.
- 9 ROC. To: Sandra Cantu, Clerk, Central Records, Texas Water Commission, Austin, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 9, 1989.
- 10 ROC. To: Don Renchie, Pesticide Enforcement Coordinator, Pesticide Enforcement Division, Texas Department of Agriculture, Austin, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 9, 1989.

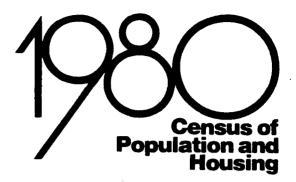
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 - ROC. To: David Dodgen, On-Scene Coordinator, Emergency Response Division, U.S. EPA, Dallas, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 18, 1989.
 - ROC. To: Allan Mueller, Assistant Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 19, 1989.
 - ROC. To: Ed Ranzau, Hydrologist, Surface Water Division, United States Geological Survey, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 19, 1989.
 - ROC. To: Tom Buckingham, Assistant Section Chief, Water Rights Administration Section, Texas Water Commission, Austin, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 19, 1989.
 - ROC. To: Billy Risinger, Section Chief, Meter Reading Section, City of Houston Water Department, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 19, 1989.
 - 17 ROC. To: Kathlie Sheu, Engineer, Ground Water Section, Public Works Department, City of Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. March 28, 1989. Support Documents Included.
 - 18 ROC. To: David Myers, District Conservationist, U.S. Soil Conservation Service, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 19, 1989.
 - 19 ROC. To: Dana Barbie, Section Chief, Ground Water and Subsidence Section, U.S. Geological Survey, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 20, 1989.
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Number

Description of the Reference

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- 22 ROC. To: Petty Hunter, Superintendent, City of Houston Parks
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- ROC. To: Al Calloway, Executive Assistant to Harris County Commissioner (Precinct 1) El Franco Lee, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 20, 1989.
- ROC. To David Dodgen, On-Scene Coordinator, Emergency Response Division, U.S. EPA, Dallas, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 21, 1989.
- ROC. To: John L. Jones, Recreation Superintendent, Edgewood Park, City of Houston Parks Department, Houston, Texas. From: Raymond Wayne, FIT Hydrologist, Ecology and Environment, Inc., EPA Region VI. April 21, 1989.
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Census Tracts

HOUSTON, TEX.

STANDARD METROPOLITAN STATISTICAL AREA

PHC80-2-184

Section 1: Tables P-1-P-17

Issued July 1983



U.S. Department of Commerce
Malcolm Baldrige, Secretary
Robert G. Dederick,
Under Secretary for
Economic Affairs

BUREAU OF THE CENSUS
Bruce Chapman, Director

Table P-1. General Characteristics of Persons: 1980—Con.

[For meaning of symbols, see Introduction. For definitions of terms, see appendixes A and β]

	Houston city (pt.), Harris County—Con.												
Census Tracts	Tract 0302	Tract 03 03	Tract 0304.01	Tract 0304.02	Tract 0305.01	Tract 0305.02	Tract 0306	Tract 0307.01	Tract 0307.02	Tract 0308	Tract 0309.01	Tract 03 09.02	Tract 0309.03
AGE										*· <u>-</u>			
Total persens Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 65 to 74 years 75 years and over	6 654 692 606 489 571 814 1 351 643 488 431 285 284	2 127 197 184 184 227 195 264 199 216 193 176 92	4 642 337 419 415 438 391 612 405 472 434 426 293	5 206 507 464 486 495 417 754 483 456 499 384 261	4 250 364 361 364 314 363 667 378 430 356 246	4 251 323 356 372 788 761 490 305 253 278 178 127	5 119 333 356 390 429 504 880 543 543 545 491 440 208	5 780 579 523 469 478 639 1 129 606 486 486 397 322 152	4 900 351 358 321 352 577 927 422 478 487 360 267	7 431 406 376 294 916 2 002 1 372 536 536 389 397 237	6 049 655 524 436 505 649 1 123 544 449 475 407 282	3 084 286 166 127 262 611 773 265 164 175 164 93	3 110 301 220 153 189 307 533 270 233 233 330 351 223
3 and 4 years	261 4 760 4 537 4 139 747 674 26.0	74 1 510 1 427 1 293 355 317 27.3	144 3 385 3 199 2 938 925 832 29.8	193 3 639 3 451 3 182 866 767 27.8	139 3 098 2 973 2 779 798 704 30.1	119 3 122 2 963 2 134 439 374 21.0	140 3 947 3 776 3 541 870 789 30.4	228 4 096 3 922 3 633 653 573 26.3	139 3 808 3 662 3 424 859 767 29.6	149 6 299 6 162 4 980 814 752 24.1	244 4 343 4 159 3 800 921 835 26.8	84 2 486 2 397 2 144 354 308 25.7	116 2 399 2 334 2 197 740 687 31.5
Female Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 75 years and over	3 245 320 280 248 293 374 579 301 247 227 177 199	1 091 99 81 89 114 106 127 106 117 96 97	2 538 179 218 199 194 228 334 227 236 260 271	2 765 255 215 258 250 230 402 262 242 242 254 228 169	2 240 157 188 182 156 191 350 167 231 237 208 173	2 326 158 176 192 358 404 286 213 154 110 81	2 663 169 193 173 221 219 430 291 291 272 267 137	3 013 286 262 225 259 312 566 312 268 234 180	2 716 173 164 171 192 301 505 231 300 280 212	3 576 233 196 145 502 890 494 246 273 220 229 148	3 073 335 288 203 248 320 501 251 244 257 244 182	1 427 141 92 62 133 282 279 109 78 102 96 53	1 616 154 105 64 95 144 249 133 128 183 214
3 and 4 years	136 2 332 2 210 2 028 471 436 26.6	32 807 761 689 198 183 28.4	71 1 896 1 814 1 688 595 530 31.7	92 983 886 745 515 465 28.8	61 1 681 1 624 1 528 496 447 31.8	56 1 765 1 694 1 292 281 235 22.4	72 2 081 1 994 1 877 538 486	128 2 179 2 092 1 933 404 353 27.3	65 2 178 2 108 1 960 539 489 31.2	78 2 976 2 904 2 286 481 448 23.7	119 2 202 2 112 1 931 552 509 27.1	47 1 126 1 070 948 213 186	63 1 274 1 245 1 171 464 433 34.8
HOUSEHOLD TYPE AND RELATIONSHIP													
Tetel persens In households	6 654 6 608 2 243 1 485 758 609 1 134 2 828 403 	2 127 2 122 791 496 295 263 245 1 007 79 	4 642 4 624 1 852 1 075 777 687 419 2 165 188 - 18 2.50 3.40	5 206 5 206 5 206 1 941 1 232 709 613 567 2 465 233 	4 250 4 250 1 758 1 000 758 499 151 2.42 3.34	4 251 3 365 289 803 486 448 7 727 105 - 886 2.61 3.45	5 119 5 119 2 076 1 210 866 737 650 2 064 329 - - 2.47 3.24	5 780 5 680 2 053 1 345 708 569 640 2 630 357 97 3 2.77 3.43	4 900 4 665 1 781 1 247 534 438 438 1 954 197 235 	7 431 5 751 2 381 1 319 1 062 854 974 1 847 549 1 680 2.42 3.14	6 049 6 049 2 112 1 408 704 589 1 120 2 570 247 	3 086 3 086 1 315 731 584 468 551 961 259 	3 110 3 034 1 199 785 414 357 1 034 1 150 18 1 253 3 115
Persons 65 years and ever In households	569 569 387 218 198 90 73 19	268 267 207 134 124 33 20 7	719 719 555 348 320 67 75 22	645 645 458 231 215 107 63 17	602 602 457 253 241 79 56 10	305 305 256 161 156 28 21	648 648 445 211 184 108 70 25	474 407 274 104 96 65 59 9	627 426 258 83 73 92 65 11	634 633 449 251 245 128 49 7	689 475 247 232 127 77 10	257 257 156 59 57 66 29 6	574 541 378 172 164 130 30 31 18
FAMILY TYPE BY PRESENCE OF OWN CHILDREN	1 485	496	1 075	1 232	1 000	803	1 210	1 345	1 247	1 319	1 406	731	785
With own children under 18 years	828 1 828 1 134	265 577 245	525 1 135 419	661 1 443 567	473 1 011 442	477 1 043 244	536 1 052 650	759 1 566 640	575 1 022 733	586 1 095 974	759 1 669 1 120	332 583 551	346 709 651
With own children under 18 years Number of own children under 18 years Female bessehelder, se bestend present	677 1 547 240	109 242 216	182 358 555	258 559 549	213 448 453	102 208 505	265 519 459	351 709 599	278 481 437	427 827 2 45	633 1 418 202	252 464 106	289 600 94
With own children under 18 years Number of own children under 18 years	128 244	140 303	311 717	366 827	240 523	357 790	248 496	381 813	268 499	140 243	107 213	63 99	42 81
Male, 15 years and ever Male, 15 years and ever we married, except separated parated proof.	2 470 870 1 312 57 57 174	740 274 268 66 57 75	1 529 630 480 142 116 161	1 712 627 605 179 103 198	1 448 563 494 118 113 160	1 400 912 290 76 48 74	1 912 738 725 148 82 219	1 969 845 721 147 62 194	1 662 550 795 92 65 160	3 353 1 940 1 083 99 45 186	2 187 676 1 247 54 59 151	1 375 541 636 69 16 113	1 143 305 707 29 39 63
Female, 15 years and ever	2 397 554 1 236 74 329 204	822 235 267 80 151 89	1 942 545 469 225 465 238	2 037 594 618 205 365 255	1 713 449 480 178 387: 219	1 800 880 275 190 231 224	2 128 555 717 169 342 345	2 240 683 714 234 290 319	2 208 629 800 178 334 267	3 002 1 411 1 025 84 267 215	2 247 474 1 191 83 303 196	1 132 285 592 52 108 95	1 293 256 677 34 227 99

HOUSTON, TEX., SMSA

Table P-1. General Characteristics of Persons: 1980—Con.

[for meaning of symbols, see introduction. For definitions of terms, see appendixes A and B] ${\bf B}$

	Houston city (pt.), Harris County—Con.												
Census Tracts	Troct 0310	Tract 0311	Tract 0311.99	Tract 0312	Troct 0312.99	Tract 0313.01	Tract 0313.02	Tract 0314.01	Tract 0314.02	Tract 0315	Tract 0316.01	Tract 0316.02	Tract 0317.01
AGE							· · · · · ·						
Total parsens Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 35 to 64 years 55 to 64 years 75 years and over	7 131 687 654 758 876 1 164 630 649 461 274	10 079 1 127 1 089 988 1 098 970 1 568 966 916 661 454 242	-	7 792 809 827 748 771 838 1 265 772 678 533 342 209	33 	\$ 359 571 431 362 462 649 1 028 491 351 372 378 224	5 432 534 470 437 394 518 988 468 416 481 456 270	4 320 418 392 452 471 398 687 551 447 278 152 74	3 664 441 329 203 283 397 786 317 303 318 188 99	6 102 433 477 460 526 616 1 057 664 722 486 344	3 221 212 169 156 208 428 928 350 311 218 148 93	1 493 23 20 37 53 492 380 119 95 85 99	1 719 110 42 27 24 320 663 157 90 112
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	309 4 837 4 554 4 036 625 553 23.8	468 6 657 6 212 5 590 975 840 23.7	-	337 5 272 4 951 4 461 787 681 24.3	33 29 18 2 2 2	204 3 931 3 746 3 421 825 749 26.6	213 3 922 3 781 3 515 995 891 28.0	171 2 959 2 773 2 504 331 278 25.4	168 2 651 2 547 2 332 432 366 26.7	171 4 633 4 413 4 089 850 762 29.5	73 2 646 2 572 2 422 331 294 29.0	6 1 409 1 385 1 311 227 209 26.9	26 1 538 1 529 1 498 233 199 28.6
Female Under 5 years Sto 9 years Sto 9 years Sto 19 years Sto 34 years Sto 34 years Sto 54 years Sto 54 years Sto 54 years Sto 54 years Sto 574 years St	3 362 397 330 324 363 383 500 299 294 209 159 104	584 541 495 530 404 716 442 464 309 260 135	-	3 647 373 385 378 357 348 547 351 308 293 183 124	17 	2 684 284 211 189 224 312 453 231 173 224 230 153	2 828 246 236 209 175 262 478 241 213 301 274 193	2 244 211 175 215 244 215 374 307 231 145 81	1 739 208 153 96 139 177 334 132 164 162 106 68	3 249 205 240 233 253 314 542 355 399 253 215 240	1 456 104 73 87 100 200 367 134 101 83 63	868 10 9 17 26 348 188 54 45 53 64 54	743 43 22 15 15 11 146 270 61 43 55 45 32
3 and 4 years	143 2 243 2 102 1 863 343 309 23.5	249 3 144 2 928 2 648 519 454 23.5	- - - -	154 2 442 2 297 2 074 436 377 24.7	17 15 9 2 2 21.5	96 1 968 1 877 1 715 497 452 27.4	95 2 116 2 052 1 921 654 573 30.5	74 1 593 1 493 1 356 185 158 26.4	74 1 261 1 214 1 104 243 215 27.3	86 2 520 2 422 2 252 555 508 31.4	37 1 168 1 138 1 067 182 169 28.9	2 830 822 764 143 133	11 663 658 643 103 87 28.4
HOUSEHOLD TYPE AND RELATIONSHIP Total persons In households Households Householder Family householder Living clone Spause Other relatives Issands of institution Other, in group quarters Parsons per household	7 131 7 125 2 057 1 514 425 1 188 3 511 369 - 6	10 079 10 065 2 718 2 173 545 471 1 714 5 318 315 - 14 3.70 4.24		7 792 7 780 2 152 1 716 436 349 1 349 3 919 360 - 12 3.62 4.07	33	5 359 5 258 1 894 1 262 632 508 1 040 2 090 234 101 2.78 3.48	5 432 5 432 1 847 1 366 481 386 1 003 2 265 317 	4 320 4 320 1 376 1 095 281 236 705 2 120 119 - - 3.14 3.58	3 444 3 650 1 314 903 411 339 737 1 440 159 14 2.78 3.41	6 102 5 818 2 111 1 443 668 548 913 2 541 253 127 157 2.76 3.39	3 221 2 998 1 414 642 772 642 371 970 243 131 92 2.12 3.09	1 493 639 389 130 259 214 112 59 79 233 621 1.64 2.32	1 719 1 611 898 360 538 428 304 263 146 74 34 1.79 2.58
Persons 65 years and ever	440 440 294 148 141 87 50 9	696 455 188 179 131 96 14	-	551 551 369 136 128 102 71 9		622 621 417 207 197 142 49 13	726 726 484 204 183 151 73 18	226 226 139 49 45 48 35 4	287 287 197 93 87 61 27 2	455 307 161 154 75 65 8 115	241 166 120 71 63 18 21 7	189 147 107 62 61 33 3 4 26 16	174 131 95 55 52 26 9
FAMILY TYPE BY PRESENCE OF OWN CHILDREN Families With own children under 18 years	1 514 969	2 1 73 1 375	:	1 716 1 036	:	1 262 650	1 366 679	1 095 667	903 479	1 443 757	642 314	1 30 22	340 128
Mumber of own children under 18 years	2 276 1 188 800 1 916	3 34\ 1 714 1 161 2 858	=	2 501 1 349 901 2 205	-	1 040 549 1 216	1 003 522 1 159	1 317 7 05 426 859	737 402 830	913 443 801	547 371 173 321	32 112 17 25	304 112 161
Female boushelder, so husband present With own children under 18 years Mumber of own children under 18 years	227 144 302	295 166 360	=	241 116 262	=	142 89 184	292 134 236	308 202 394	122 65 147	443 288 564	200 127 208	11 5 7	33 13 16
MARITAL STATUS						•							
Male, 15 years and ever Single	2 667 893 1 515 94 56 109	3 615 1 165 2 025 154 109 162	-	2 897 977 1 699 53 61 107	16 16 - - -	1 995 627 1 150 41 42 135	1 854 546 1 097 50 37 124	1 413 483 738 65 28 99	1 409 450 811 38 26 84	2 161 825 1 011 101 69 155	1 492 693 467 102 63 167	581 335 154 23 16 53	877 384 389 20 20 64
Female, 15 years and ever	2 311 518 1 313 105 241 134	3 240 742 1 885 110 340 183	- - - - -	2 511 552 1 467 85 274 133	17 17 - - -	2 000 411 1 106 45 276 162	2 137 387 1 070 84 388 208	1 645 440 740 93 119 253	1 282 214 782 32 141 113	2 571 791 988 166 354 272	1 192 380 399 100 156 157	517 170 13 70 62	207 334 14 41 67

Table P-1. General Characteristics of Persons: 1980—Con.

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

_		· · · · · · · · · · · · · · · · · · ·		,, <u>.</u>	н	Houston city (pt.), Harris County—Con.							
Census Tracts	Tract 0317.02	Tract 0317.03	Fract 0317.04	Troct 0318.01	Tract 0318.02	Tract 0318.03	Tract 0318.04	Tract 0319.01	Tract 0319.02	Tract 0320.01	Tract 0320.02	Tract 0320.03	Trac* 0320.0∠
AGE					-								
Total persene Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 55 to 64 years 57 years 57 years	389 27 19 28 31 30 68 47 51 39 42	3 633 249 323 379 505 337 431 484 503 249 131	6 189 485 573 653 743 583 924 772 693 432 228 103	3 726 330 364 331 403 363 646 460 354 252 164 59	6 273 551 638 762 857 543 864 875 608 332 175 68	3 567 330 352 456 435 285 500 444 349 279 95 42	3 912 372 339 390 477 443 613 549 372 223 94	3 768 437 262 185 276 529 843 373 257 303 208 95	3 253 327 251 199 201 415 720 263 257 259 211	4 497 488 372 307 325 469 872 359 322 451 333 199	2 379 291 201 137 195 404 499 235 145 118 100 54	5 231 409 305 252 369 720 1 205 492 485 485 367 179	2 652 225 158 125 161 261 539 197 209 323 314 140
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	10 308 294 279 64 56 34.1	87 2 582 2 375 2 103 282 238 25.4	196 4 329 4 022 3 609 505 440 25.6	133 2 633 2 464 2 232 348 293 25.8	211 4 116 3 759 3 311 374 317 22.7	118 2 328 2 147 1 935 281 209 23.8	139 2 723 2 525 2 246 231 182 24.3	161 2 855 2 759 2 529 455 385 26.7	123 2 450 2 383 2 196 477 425 27.6	181 3 271 3 126 2 928 773 663 27.8	105 1 709 1 636 1 512 197 177 24.6	120 4 212 4 092 3 778 754 665 28.3	81 2 120 2 058 1 934 630 566 31.6
Female Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 75 years and over	186 13 6 11 20 14 29 17 27 27 21 25 3	1 873 110 161 186 240 179 250 269 257 121 75 25	3 247 246 264 329 377 307 517 451 352 218 123 63	1 940 155 176 172 210 188 351 249 188 126 92 33	3 312 268 314 389 429 302 484 486 325 177 96 42	1 868 162 187 234 196 146 274 252 193 149 53 22	2 044 174 164 200 257 238 314 305 200 106 57 29	1 856 216 143 97 156 236 359 167 121 174 109 78	1 629 157 131 95 108 208 323 117 123 144 117	2 276 212 175 159 155 245 403 164 174 271 181	1 155 132 107 70 101 196 211 99 77 65 63 34	2 578 185 158 138 199 349 518 217 240 249 209 116	1 377 113 74 66 75 136 242 103 113 118 180 91
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	7 153 142 133 32 31 35.5	34 1 360 1 262 1 141 154 135 27.0	90 2 329 2 182 1 972 273 242 27.3	59 1 412 1 322 1 190 188 154 26.5	101 2 247 2 068 1 821 205 172 24.0	58 1 237 1 154 1 053 150 117 25.3	63 1 453 1 347 1 205 118 102 24.8	78 1 388 1 319 1 206 279 239 26.4	60 1 234 1 199 1 088 284 260 28.0	75 1 702 1 632 1 532 464 397 29.2	45 825 789 719 118 110 24.2	48 2 064 1 990 1 846 443 392 28.7	38 1 112 1 084 1 026 373 342 33.5
HOUSEHOLD TYPE AND RELATIONSHIP													
In households	389 380 158 100 58 53 73 135 14 	3 633 3 630 1 060 872 188 167 568 1 926 76 	6 189 6 184 1 963 1 488 475 408 923 3 109 189 — 5	3 726 3 726 1 268 927 341 282 564 1 762 132 	6 273 6 273 1 643 1 416 227 193 945 3 543 142 	3 567 3 567 998 823 175 149 529 1 951 89 - - - 3.57	3 912 3 909 1 232 931 301 262 579 1 956 142 - 3 3.17	3 768 3 768 1 561 991 570 492 799 1 251 157	3 258 3 137 1 267 821 446 384 635 1 121 114 116 	4 497 4 389 1 641 1 119 522 463 896 1 737 115 108 	2 379 2 379 903 604 299 254 457 929 90	5 231 5 230 2 243 1 325 1 018 836 1 039 1 515 333 -	2 652 2 652 1 128 755 373 316 621 799 104
Persons per family Parsens 65 years and over In householder Nonfamily householder Living clone Spouse Other relatives Nornalistives Inmare of institution Other, in group quarters	3.08 49 49 29 9 18 2	3.86 173 173 99 23 20 35 36 3	3.71 331 331 206 74 72 62 53 10	3.51 223 223 137 44 40 57 26 3	4.17 243 243 141 47 42 29 64 9	4.01 137 137 83 27 24 22 32	3.72 134 134 85 39 37 24 21 4	3.07 303 303 236 126 117 42 17 8	3.14 361 271 177 68 65 62 30 2	3.35 532 437 312 146 146 85 40 -	3.29 154 154 115 62 57 29 9	2.93 546 546 367 165 163 141 34 4	2.88 454 454 310 139 135 113 31
FAMILY TYPE BY PRESENCE OF OWN CHILDREN													1
With own children under 18 years	1 00 42 70	872 522 1 062	1 488 883 1 835	927 552 1 077	1 416 930 2 156	823 509 1 192	931 590 1 180	991 495 870	821 426 784	1 119 607 1 238	404 358 660	1 325 569 1 009	755 300 532
Married-crepts families With own children under 18 years Number of own children under 18 years	73 28 47	568 329 650	923 520 1 073	564 307 627	945 634 1 484	529 328 793	579 344 688	799 403 715	6 35 319 603	896 485 1 006	457 273 516	1 039 419 775	621 239 445
Female hareshelder, as heahand present	1 8 8 16	251 170 374	466 323 687	310 229 422	388 257 583	250 157 351	294 220 451	118 66 114	144 87 148	172 107 211	92 64 116	205 121 192	107 54 77
MARITAL STATUS								•	,				
Melle, 15 years and over	159 55 76 12 3 13	1 266 500 601 57 32 76	2 070 758 984 112 66 150	1 264 463 616 68 26 91	1 981 727 1 028 75 36 115	1 144 431 563 56 24 70	1 305 503 621 73 22 86	1 484 435 848 45 33 123	1 230 352 671 49 42 116	1 600 433 966 31 53	904 290 494 20 12 88	2 168 652 1 135 71 46 264	1 020 242 648 18 26 86
Female, 15 years and over	154 43 77 11 14	1 416 456 593 92 131 144	2 408 708 991 186 235 288	1 437 419 602 129 111 176	2 341 708 1 018 168 183 264	1 283 359 564 107 116 139	1 506 507 615 136 111 137	1 400 209 823 30 185 153	1 246 216 667 52 174 137	730 263 952 54 289 172	846 166 476 32 82 90	2 097 448 1 078 85 236 250	1 124 155 641 22 183 123

Table P-1. General Characteristics of Persons: 1980—Con.

(for meaning of symbols, see introduction. For definitions of terms, see appendixes A and B)

Houston city (pt.), Harris County—Con.													
Census Tracts	Tract 0321.01	Tract 0321.02	Fract 0321.03	[†] ract 0321. 99	Tract 0322.01*	Fract 0322.02	Tract 0322.03	Tract 0322.04	Tract 0323.01	Troct 03 23.02	Troct 0324.01	Froct 0324.02	Tract 0324.03
AGE													
Total parisons Juder 5 years 5 to 9 years 10 to 14 years 20 to 24 years 25 to 34 years 25 to 54 years 55 to 54 years 55 to 54 years 55 to 64 years 55 to 64 years 57 years and over	8 844 856 703 571 738 1 634 2 021 740 533 533 526 360	2 170 258 226 179 217 220 302 198 205 182 112 71	2 294 261 241 246 268 206 343 210 212 151	108 - - 8 34 26 10 20 9		4 220 404 394 356 319 409 815 463 412 409 176 63	3 215 259 260 279 271 279 575 305 305 359 366 172 90	2 704 129 163 160 331 217 345 250 516 388 137 68	5 109 484 417 309 392 540 968 468 451 546 377 157	3 993 413 274 231 337 677 882 436 385 244 87 27	3 314 196 119 92 191 543 684 246 341 435 235 232	9 170 557 403 335 547 1 975 2 522 838 780 724 374	53 2 3 2 4 3 7 7 7 7 3 12 8 2
3 and 4 years 1 8 years and over 21 years and over 60 years and over 42 years and over Madian	300 6 589 6 326 5 722 775 662 24.8	106 1 461 1 370 1 245 262 234 24.7	102 1 496 1 391 1 229 214 189 22.8	108 106 93 4 3		156 2 995 2 853 2 681 409 322 27.2	99 2 354 2 251 2 089 411 340 28.6	2 200 2 062 1 865 338 280 35.4	190 3 825 3 663 3 425 783 672 28.7	151 3 037 2 916 2 631 214 166 25.5	50 2 885 2 830 2 614 673 583 31.4	162 7 804 7 625 7 045 800 653 26.9	2 46 45 42 20 18 37.8
Female	4 144 419 360 269 388 723 810 298 286 272 203 116	1 033 124 106 76 104 111 132 99 102 81 60 38	1 083 122 119 118 115 83 158 108 101 77 50 32	18 4 9 3 3 1 - 2		2 124 204 182 173 155 225 396 216 224 209 97	1 638 131 120 131 130 159 266 :50 202 183 102 64	1 333 59 95 78 148 89 156 138 281 180 72 47	2 589 242 219 150 179 286 432 223 228 303 221	1 924 207 147 120 177 313 374 206 193 115 52 20	1 746 98 65 46 104 259 310 123 193 239 129 180	4 447 293 212 161 321 1 004 1 078 347 390 381 209 71	18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3 end 4 years and over 18 years and over 27 years and over 40 years and over 42 years and over	142 3 040 2 894 2 588 450 390 24.4	53 702 659 602 137 121 24.8	49 705 651 588 111 96 23.7	18 16 12 2 2 2 22.5		78 1 528 1 460 1 376 225 178 27.3	43 1 217 1 177 1 098 243 208 29.7	25 1 086 1 026 943 180 155	99 1 940 1 877 1 761 455 400 29.1	82 1 430 1 367 1 226 115 95	25 1 525 1 495 1 369 414 362 34.5	89 3 765 3 658 3 313 440 361 26.2	16 16 15 7 7 37.0
INDUSCHOLD TYPE AND RELATIONSKIP Total parsess In heseholds Insurabile Insur	8 846 8 811 3 441 1 998 1 443 1 137 1 560 3 310 500 35 2.56 3.44	2 170 2 170 703 460 243 213 330 1 048 89 - - - 3.09 4.00	2 294 2 284 598 501 97 79 407 1 167 112 10 3.82 4.14	108	•	4 229 4 220 1 353 1 137 216 180 978 1 756 113 	3 218 3 215 1 127 875 252 229 760 1 268 60 	2 704 2 704 934 791 143 117 713 1 000 57 	5 109 5 109 1 942 1 339 603 523 1 111 1 878 178 	3 993 3 993 1 584 1 021 563 416 790 1 345 274 —	3 314 3 118 1 524 846 678 553 660 757 177 196 	9 170 9 170 4 667 2 340 2 327 1 937 1 906 2 073 524 — 1.96 2.70	\$3 : 50 28 : 11 17 16 8 11 3 - 3 3 1.79 2.73
Persons 65 years and over In banaholds Hessaholder Redunsly householder Living alone Sysse Other relatives Hessaholdes Mannholdes basis Other, is group quarters	524 523 349 152 146 102 66 6	183 183 135 75 69 27 10	156 156 101 36 32 33 15 7	1		239 239 159 56 55 49 27 4	262 262 180 84 82 61 20	205 205 118 32 31 61 21	534 534 372 172 170 116 45	114 114 67 31 31 24 22 1	447 292 191 78 75 69 31 1	489 489 318 129 123 115 48 8	10 10 10 6 2 2 4 4
FAMILY TYPE BY PRESENCE OF OWN CHILDREN This was children under 18 years Buther of own children under 18 years	1 998 1 046 2 249	440 261 648	501 299 772	=	•••	1 137 653 1 239	875 431 881	791 354 600	1 339 641 1 302	1 021 572 954	844 291 442	2 349 880 1 396	11
With own children under 18 years Number of own children under 18 years Remain householder, no husband grasser	1 540 837 1 856 296 171	330 203 513 98 48	407 254 664 55 28	= =		998 574 1 110 105 59	760 372 779 96 51	713 311 522 52 31	1 111 539 1 115 165 86	790 433 744 165	201 317 146 81	1 906 638 1 039 316 206	2
MARITAL STATUS SE Main, 15 years and over We convied, except separated Parated Research	321 3 629 1 378 1 705 149 53 335	780 246 389 36 37 72	76 822 282 470 17 19 34	90 38 43 3 - 6		98 1 501 333 1 034 22 20 92	1 161 246 784 20 20 91	55 1 141 329 732 17 17 46	1 921 501 1 171 44 31 174	173 1 625 521 846 80 10 168	1 370 422 712 27 51 156	302 4 074 1 425 2 034 134 48 433	30 9 4 -1 7
Remain, 15 years and over	3 096 726 1 659 115 272 324	727 151 357 51 121 47	724 152 438 26 73 35	18 17 - - 1		1 545 233 1 032 30 149 121	1 256 171 785 21 155 124	1 111 219 730 20 82 60	1 978 306 1 153 45 269 205	1 450 276 812 74 83 205	1 537 307 698 48 286 198	3 801 996 1 965 112 250 476	16 3 8 1 1 3

Table P-1. General Characteristics of Persons: 1980—Con.

[For meaning of symbols, see introduction, for definitions of terms, see appendixes A and B]

- .	Houston city (pt.), Harris County—Con.												
Census Tracts	Tract 0324.04	Troct 0325.01	Troct 03 25.02	Tract 03 26	Tract 0327.01	Tract 0327.02	Tract 0328.01	Tract 0328.02	Tract 0328.03	Tract 0329.01	Fract 0329.02	Tract 0329.03	7roct 9
AGE												·	
Total persons Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 75 years and over	4 666 230 164 113 292 889 1 078 429 476 628 264 103	2 306 204 200 185 201 241 412 226 253 214 121 49	6 245 618 646 529 474 526 1 300 665 460 460 344 223	6 637 496 495 587 551 523 1 107 727 689 757 421 184	6 123 474 618 752 920 520 763 923 660 329 125 39	4 126 380 422 491 538 345 618 593 390 227 88 34	7 271 666 767 930 042 587 920 892 660 414 246	4 918 393 474 554 655 424 646 608 480 445 178 61	3 840 277 374 435 459 308 536 420 422 356 170 83		4 945 366 419 457 569 420 616 441 504 438 216	4 388 342 404 426 468 433 532 369 441 493 332 148	20 1
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	74 4 109 4 023 3 720 628 512 29.4	75 1 676 1 614 1 468 273 228 27.3	252 4 340 4 144 3 880 774 699 27.5	182 4 931 4 642 4 309 945 798 30.0	188 4 078 3 693 3 217 292 245 22.5	149 2 710 2 479 2 209 191 162 23.3	259 4 698 4 256 3 713 560 473 21.6	145 3 343 3 076 2 731 438 346 24.4	103 2 662 2 484 2 232 394 330 26.1		3 587 3 587 3 353 3 034 896 785 28.2	123 3 123 2 952 2 647 702 619 26.6	20 20 19 11 11 78.0
Female Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 65 to 74 years 75 years and over	2 276 105 85 57 167 428 459 195 259 298 148 75	1 108 86 91 94 95 109 188 102 137 105 69	3 226 300 331 261 223 248 662 343 240 238 205	3 344 241 242 306 312 241 569 346 359 401 208 119	3 238 228 310 373 459 266 446 534 369 154 71 28	2 162 211 201 242 265 171 349 332 209 106 53	3 895 319 381 444 521 302 556 541 359 238 136 98	2 617 202 250 276 319 214 356 353 273 236 100 38	2 063 140 196 234 223 169 302 244 234 185 87 49		2 685 185 204 228 317 220 328 248 287 287 259	2 366 167 216 203 240 215 300 202 262 273 197 91	7
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	32 2 002 1 952 1 778 347 289 29.6	32 819 787 720 153 132 28.5	2 283 2 189 2 059 490 451 28.6	90 2 491 2 347 2 194 502 433 30.7	97 2 225 2 040 1 789 160 139 24.6	78 1 449 1 333 1 202 104 91 24.7	117 2 643 2 418 2 147 336 286 24.6	68 1 813 1 688 1 510 238 189 26.3	53 1 455 1 360 1 241 206 173 27.4		72 2 001 1 877 1 698 516 456	60 1 733 1 640 1 484 406 361 29.1	7 7 6 6 6 81.2
HOUSEHOLD TYPE AND RELATIONSHIP										_			
Tetal persens In households Households Householder Family householder Family householder Living alone Living alone Compared Living alone Compared Living alone Compared Living alone Compared Compared	4 666 4 664 2 374 1 273 1 101 932 1 054 1 017 219 2 1 .96 2.63	2 306 2 306 766 594 172 146 505 965 70 — 3.01 3.47	6 245 6 148 2 109 1 557 552 496 1 276 2 638 125 97 	6 620 2 169 1 773 396 333 1 495 2 816 140 	6 123 6 123 1 533 1 362 171 138 929 3 562 99 3.99 4.30	4 126 4 126 1 126 1 127 1 123 1 103 1 678 2 292 86 	7 271 7 171 1 946 1 644 302 265 915 4 179 131 97 3 3.68 4.10	4 918 4 918 1 343 1 150 193 170 746 2 730 99 3.66 4.02	3 840 3 840 1 134 931 203 183 599 2 030 77 3.39 3.82		4 945 4 945 1 635 1 169 446 397 656 2 495 159 3.02 3.65	4 388 4 388 1 428 1 049 379 321 547 2 246 167 3.07 3.66	29 20 11 7 4 3 6 2 1 - - 1.82 2.14
Persons &S years and ever In households Households Nonfermity householder Living done Spouse Other relatives Nonrelatives Immore of institution Other, in group quarters	367 367 231 92 89 90 44 2	170 170 115 50 49 37 18	\$67 482 344 202 200 81 56 1 85	605 602 375 106 98 148 74 5 -	164 164 95 22 18 25 42 	122 122 57 16 14 20 45 	393 319 199 75 70 58 54 8 74	239 239 151 40 39 39 47 2	253 253 165 63 59 42 41 5		654 654 460 177 165 117 57 20	480 480 337 126 112 77 57 9	11 5 - - - - - - - -
FAMILY TYPE BY PRESENCE OF OWN CHILDREN	1 273	594	1 557	1 773	1 362	947	1 644	1 150	931		1 197	1 049	,
With own children under 18 years	37 3 571	310 631	948 1 949	913 1 810	897 1 960	616 1 357	1 102 2 570	652 1 451	541 1 146	•••	543 1 238	492 1 088	=
Married-couple families	1 054 279 457	505 273 569	1 276 767 1 607	1 495 760 1 526	929 624 1 380	678 452 1 001	91 5 597 1 357	7 46 415 913	332 692		656 283 612	547 229 507	6 - -
Female householder, as husband present With own children under 18 years Number of own children under 18 years	144 71 89	58 29 49	226 153 297	201 122 223	386 252 539	225 144 324	629 451 1 075	340 216 500	284 187 407	•••	441 236 576	409 225 515	-
MARITAL STATUS													
Melo, 15 years and over Single— Now married, except separated Separated Widowed Divorced	2 130 685 1 115 71 31 228	242 534 22 20 62	2 118 543 1 329 63 45 138	2 504 717 1 550 52 35 150	1 952 787 979 72 20 94	1 325 473 722 48 13 69	2 157 922 978 88 52 117	1 608 622 793 67 31 95	1 261 441 637 55 36 92		1 625 589 707 100 83 156	1 436 544 604 98 68 122	13 4 6 1 - 2
Female, 15 years and over	2 029 473 1 101 50 173 232	837 147 529 16 90 55	2 334 374 1 315 100 336 209	2 555 517 1 538 64 255 181	2 327 778 975 142 157 275	1 508 445 718 101 98 146	2 751 922 976 266 290 297	1 889 539 788 141 193 228	1 493 437 631 76 144 205		2 068 621 719 193 348 187	1 780 496 602 172 294 216	7 6 1 -

Table P-1. General Characteristics of Persons: 1980—Con.

(for meaning of symbols, see introduction. For definitions of terms, see appendixes A and B)

<u>.</u>	Houston city (pt.), Harris County—Con.												
Census Tracts	Tract 0330.02	Troct 0331	Tract 03 32	Tract 0333	Tract 03 34	Tract 0335.01	fract 0335.02	Tract 0335.03	Tract 0336	Tract 93 38	Fract 0339.01	7act 03 39.02	Fract 0339.03
AGE													
Total persens Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 45 to 54 years 55 to 64 years 75 years and over	3 987 346 378 339 352 353 591 340 389 456 300	5 594 166 79 36 238 1 748 - 2 285 441 249 131 60	9 006 882 1 079 1 094 988 674 1 835 1 342 707 263 115 30	3 496 356 399 285 339 297 694 505 276 151 72 22	6 499 699 667 581 596 696 1 375 858 547 320 124 36	4 499 468 490 552 396 397 858 602 370 181 56 29	6 095 640 794 659 582 382 1 275 854 454 246 111 98	3 907 439 452 406 360 267 890 507 290 179 86 31	3 770 494 478 365 244 310 1 023 451 197 125 61 22	3 137 364 327 256 244 288 715 341 235 181 135	-	6 325 355 464 595 837 666 653 606 1 026 743 278 102	2 073 271 297 260 236 200 284 178 131 99 74 43
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	29 2 829 2 689 2 482 629 543 28.1	49 5 302 5 261 4 847 285 250 26.4	344 5 711 5 320 4 839 237 175 23.7	124 2 281 2 137 1 961 142 120 24.5	261 4 440 4 200 3 833 287 221 25.1	183 2 874 2 667 2 432 155 124 23.3	287 3 891 3 630 3 326 292 252 24.9	191 2 525 2 364 2 202 195 153 25.4	206 2 366 2 267 2 147 132 110 24.9	142 2 130 2 038 1 906 263 222 26.3		138 4 743 4 415 3 906 651 521 27.9	119 1 204 1 098 966 152 137
Fearable Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 25 to 34 years 35 to 44 years 35 to 64 years 55 to 64 years 55 to 64 years 75 years and over	2 144 182 194 179 172 197 305 199 225 259 162 72	2 676 87 48 15 140 850 1 024 147 97 64 33	4 580 409 537 546 461 358 1 021 698 344 128 59	1 798 188 197 177 170 158 372 271 134 73 39 19	3 191 320 332 277 290 335 708 427 279 149 57	2 248 209 261 270 225 208 445 311 180 87 34	3 140 322 401 331 289 205 689 428 227 119 67 62	1 947 218 220 204 168 135 458 249 134 94	1 853 212 195 175 135 163 544 226 87 71 34	1 511 174 160 123 114 135 343 153 115 96 69 29	-	3 333 177 216 301 407 346 346 360 586 586 145 63	1 163 118 139 126 123 117 198 122 80 66 42 32
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	70 1 558 1 491 1 379 343 296	18 2 521 2 501 2 277 215 201 26.0	156 2 977 2 795 2 562 118 94 24.8	69 1 197 1 121 1 036 80 72 25.3	107 2 206 2 080 1 922 134 107 25.5	89 1 457 1 368 1 248 80 66	141 2 026 1 907 1 744 172 152 25.6	94 1 261 1 195 1 114 101 88 25.6	89 1 230 1 183 1 114 75 64 25.8	63 1 025 980 926 136 113 26.5	:	68 2 562 2 404 2 139 337 274 29.9	54 761 704 637 94 83
HOUSEHOLD TYPE AND RELATIONSHIP													
In householder Householder Fornilly householder Living clone Spause Other relatives Homelotives Homelo	3 987 3 987 1 385 1 021 364 327 596 1 882 124	5 594 5 439 3 374 1 070 2 304 1 775 790 607 668 153 2	9 009 9 007 2 488 2 211 277 234 1 663 4 671 185	3 496 3 496 1 036 876 160 132 661 1 719 80	6 499 6 499 2 114 1 627 487 384 1 347 2 802 236	4 499 4 499 1 213 1 056 157 120 855 2 309 122	6 095 5 925 1 629 1 479 150 109 1 201 2 963 132 170	3 907 3 907 1 122 980 142 107 842 1 850 93	3 770 3 765 1 127 972 155 125 791 1 748 99	3 137 3 124 1 022 796 226 178 663 1 291 148		6 325 6 325 1 776 1 572 204 190 1 118 3 353 78	2 073 2 032 599 488 111 103 136 1 265 32 41
Persons per household	2.88 3.43	1.61 2.31	3. 62 3. 86	3. 37 3. 72	3. 07 3. 55	3.71 4.00	3.64 3.82	3. 48 3. 75	3.34 3.61	3. 06 3. 45	-	3.56 3.84	3. 39 3. 87
Pursess 65 years and ever	423 423 297 114 108 83 355 8	221 66 46 30 28 9 8 3 153	145 143 67 18 16 23 51 2	94 94 51 20 20 18 24	160 160 104 33 30 31 23 2	85 85 46 14 14 18 21 	209 148 76 24 21 25 37 10 61	117 117 60 16 15 31 23 3	83 83 41 18 18 11 29 2	186 185 111 33 32 44 25 5		380 380 229 52 49 75 71 5	117 83 63 27 27 5 15
FAMILY TYPE BY PRESENCE OF OWN CHILDREN	1 021	1 070	2 211			1 444		***		704		1 572	458
With own children under 18 years	489 1 011	211 279	1 625 3 380	636 1 252	1 627 1 086 2 089	1 056 76 7 1 656	1 479 1 047 2 171	980 690 1 431	972 704 1 399	7 96 4 90 9 89	=	741 1 462	370 841
Mintrod-coople families With own children under 18 years Number of own children under 18 years	594 253 524	7 90 132 178	1 643 1 222 2 581	661 478 965	1 347 891 1 748	855 617 1 345	1 201 858 1 807	842 596 1 265	791 57 9 1 1 78	6 63 408 845	=	1 118 520 1 017	13 6 96 197
Female hesseholder, as heshend greent	367 21 3 45 2	1 67 62 79	440 357 718	17 5 136 257	214 161 283	170 130 270	216 162 317	1 09 77 137	1 50 112 201	90 61 108	-	365 196 402	324 261 617
MARITAL STATUS													}
Mele, 15 years and ever	313 415 634 70 65 129	2 787 1 440 903 87 20 337	2 866 897 1 726 63 25 155	1 120 329 683 23 12 73	2 290 662 1 398 43 41 146	1 481 462 890 33 14 82	1 916 512 1 244 40 33 87	1 305 334 871 26 10 64	1 162 249 820 22 7 64	1 136 290 694 33 18 101	-	2 272 836 1 190 74 71 101	465 220 149 39 17 40
Female, 15 years and ever Single married except separated Separated Widowed Divarced	1 591 401 626 149 241 174	2 526 1 228 836 76 162 224	3 068 763 1 732 107 128 358	1 234 297 681 55 58 145	2 262 506 1 387 86 107 176	1 508 333 889 73 71 142	2 084 440 1 252 71 145 178	1 305 232 866 42 55 110	1 271 211 828 41 63 128	1 054 159 694 38 70 93	:	2 637 818 1 203 144 242 232	780 289 155 119 102 115

CENSUS TRACTS

Table P-1. General Characteristics of Persons: 1980—Con.

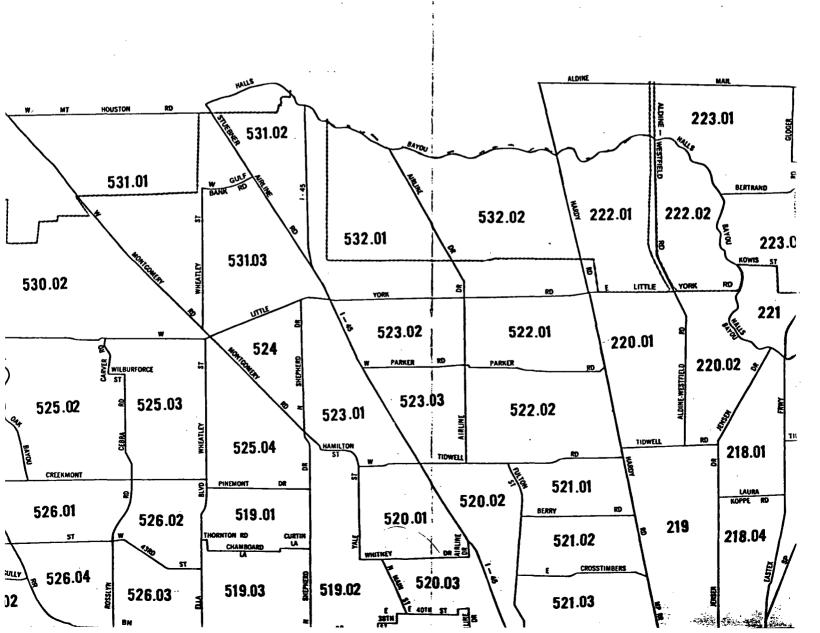
[for meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

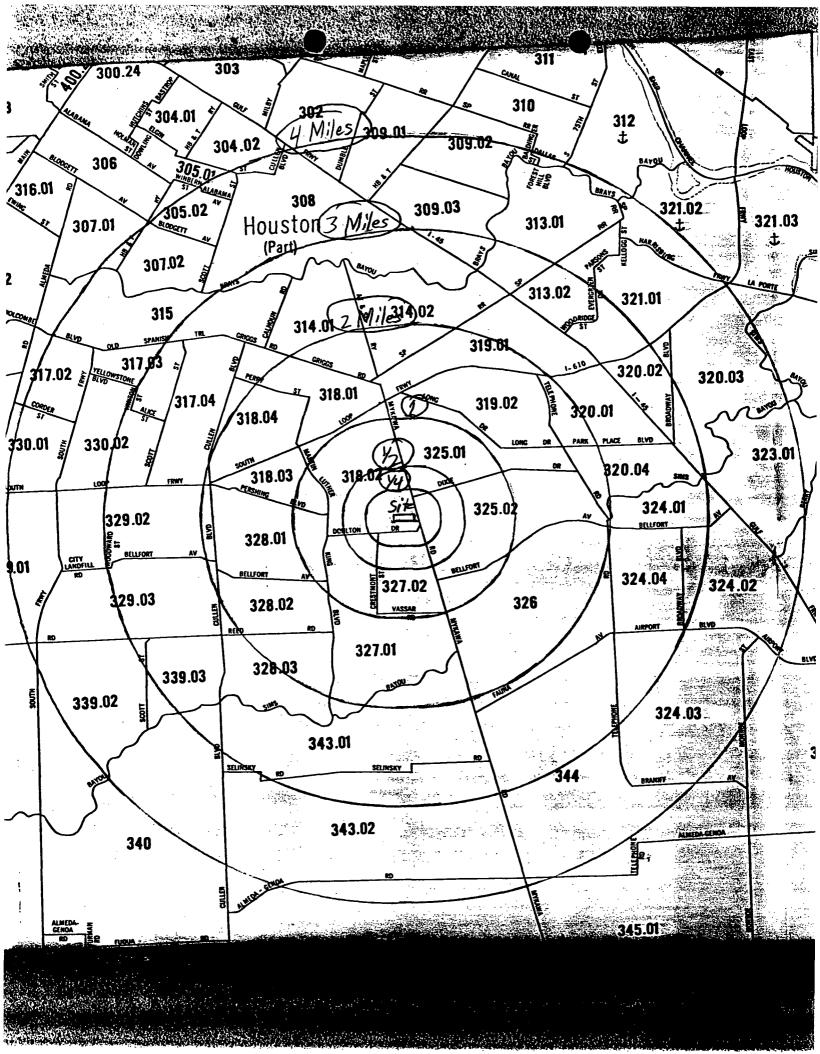
					Ho	uston city (p	ot.), Harris Ca	unty—Con.					
Census Tracts	Tract 0340	Tract 0341	Tract 0342	Troct 0343.01	Tract 0343.02	Tract 0344	Tract 0345.01	Tract 0345.02	Tract 0346	Tract 0347.01	Tract 0347.02	Tract 0347.03	Troct 0347.04
AGE								· · · · ·					
Total persons Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 55 to 64 years 75 years and over	8 100 505 665 894 1 141 740 927 1 173 1 181 585 203 86	26 2 - 1 2 7 3 2 5 3 1	891 86 70 73 60 81 134 77 100 117 66 27	5 861 - 484 636 729 820 500 753 817 615 342 118 47	12 343 1 719 1 576 1 166 952 1 666 3 169 1 230 539 212 83 31	2 011 218 134 141 140 241 435 176 162 193 117 54	5 656 615 548 417 358 589 1 239 641 542 429 213 65	2 459 230 218 265 279 245 489 365 322 146 72 28	4 047 349 256 206 345 761 984 431 330 199 124 62	5 684 454 466 495 571 656 1 019 614 697 503 151 58	4 761 407 304 295 517 916 989 480 499 255 71 28	2 170 174 213 215 184 189 380 278 287 164 54	6 455 476 426 512 658 831 1 221 696 849 480 209
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	184 5 788 5 296 4 723 525 403 25.9	24 23 23 4 4 36.0	32 651 628 578 151 124 29.8	204 3 842 3 492 3 087 292 227 22.4	674 7 689 7 347 6 676 194 158 22.6	85 1 492 1 449 1 336 244 218 27.3	236 4 014 3 864 3 617 467 373 27.3	88 1 880 1 758 1 626 167 138 26.6	116 3 191 3 074 2 751 276 234 25.7	181 4 154 3 918 3 585 356 294 26.5	152 3 687 3 497 3 041 202 153 24.6	78 1 532 1 454 1 337 148 120 27.6	174 4 934 4 676 4 209 466 384 27.0
Festale Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 45 to 54 years 45 to 54 years 55 to 64 years 75 years and over	4 172 261 352 456 532 363 498 674 624 266 95	15	442 42 32 35 29 43 66 36 42 63 39	3 110 232 319 362 434 258 449 490 316 151 63 36	6 448 841 769 589 548 974 1 699 611 254 96 46 16	1 002 98 59 66 84 131 196 80 103 69 32	2 875 309 276 206 194 316 608 302 278 228 116 42	1 361 108 114 132 151 130 238 204 145 82 40	1 940 169 129 106 195 373 400 196 162 162 64	2 807 214 232 247 269 312 495 315 364 252 70 37	2 316 196 162 144 275 436 427 258 238 123 38	1 079 81 98 104 97 94 186 146 139 84 28	3 217 231 233 257 334 383 576 357 444 234 114 54
3 and 4 years 16 years and over 18 years and over 21 years and over 60 years and over 62 years and over	94 2 998 2 762 2 491 247 201 27.0	1 14 13 13 3 3 3	15 329 318 293 83 68 29.8	111 2 099 1 917 1 711 151 125 24.1	322 4 137 3 952 3 532 102 83 22.7	39 762 739 676 139 126 27.4	124 2 046 1 969 1 844 270 215 27.1	43 971 908 836 96 87 26.6	58 1 509 1 439 1 259 158 132 25.0	79 2 063 1 959 1 784 182 152 27.0	74 1 777 1 679 1 436 107 86 24.3	38 776 734 681 82 65 27.8	83 2 436 2 311 2 076 258 216 26.9
HOUSEHOLD TYPE AND RELATIONSHIP										•			
Total persens In households Householder Fornity householder Nonfamity householder Uving alone Spause Other relatives Nonrelatives Inmare of institution Other, in group quarters	8 100 8 100 2 255 2 013 242 221 1 549 4 216 80	26 26 13 4 9 7 4 6 3	891 891 312 239 73 61 206 351 22	5 861 5 768 1 541 1 366 175 161 846 3 311 70 93	12 343 12 343 3 932 3 227 705 586 2 074 5 976 361	2 011 2 011 733 550 183 153 475 731 72	5 656 5 656 2 003 1 590 413 347 1 344 2 144 165	2 659 2 659 824 739 85 65 642 1 142 51	4 047 4 047 1 758 1 035 723 569 849 1 218 222	5 684 5 684 1 915 1 558 357 288 1 328 2 295 146	4 761 4 761 1 935 1 250 685 530 986 1 590 250	2 170 2 170 674 594 80 61 508 940 48	6 455 6 455 2 339 1 769 570 444 1 529 2 391 196
Persons per household	3.59 3.86	2.00 3.50	2.86 3. 33	3.74 4.04	3.14 3.49	2.74 3.19	2. 82 3.19	3. 23 3.41	2. 30 3. 00	2. 97 3. 33	2.46 3.06	3.22 3.44	2.76 3.22
Persess 45 years and ever	289 289 168 38 38 55 63 3	4 4 4 4	93 93 59 30 28 18 13	165 165 86 23 22 24 51 4	114 114 51 9 7 20 38 5	171 171 118 52 52 38 14 1	278 278 189 90 87 55 32 2	100 100 55 17 13 24 20	186 186 113 46 45 44 25 4	209 209 116 34 34 47 43 3	99 99 61 24 23 23 14 1	86 86 46 20 18 16 21 3	286 286 165 52 51 74 43 4
FAMILY TYPE BY PRESENCE OF OWN CHILDREN												•	
Families With own children under 18 years Number of own children under 18 years	2 013 1 237 2 432	4 1 2	239 111 227	1 366 926 2 062	3 227 2 478 4 628	550 273 514	1 590 915 1 679	7 39 460 849	1 035 497 881	1 558 900 1 623	1 250 691 1 149	594 349 651	938 652
Married-couple families With own children under 18 years Number of own children under 18 years	1 549 936 1 864	4 1 2	206 98 205	846 547 1 214	2 074 1 595 3 063	475 239 444	1 344 735 1 359	642 401 750	849 393 722	1 328 745 1 386	986 511 889	508 299 571	1 529 791 1 431
Formule householder, no bushamd present With own children under 18 years	379 258 488	:	22 11 19	4 42 360 808	904 776 1 383	57 29 59	196 155 276	- 6 8 45 74	1 35 88 139	179 134 201	191 152 218	69 44 72	175 119 181
MARITAL STATUS					-								
Male, 15 years and ever	2 933 1 033 1 632 89 60 119	10 2 5 - 3	69 213 6 15 26	1 815 686 925 71 24 109	3 638 1 063 2 159 159 25 232	738 174 491 16 9 48	1 992 420 1 395 30 29 118	939 227 657 11 8 36	1 700 523 892 36 23 226	2 155 596 1 371 35 23 130	1 941 641 1 018 61 12 209	772 181 529 14 9	2 545 741 1 566 41 18 179
Female, 15 years and ever	3 103 880 1 617 126 225 255	14 4 6 3 1	333 48 210 9 38 28	2 197 732 903 164 127 271	4 244 1 170 2 150 310 147 467	780 111 489 20 74 86	2 084 304 1 377 61 157 185	1 007 194 659 15 62 77	1 536 323 874 45 83 211	2 114 380 1 361 45 112 216	1 814 423 1 009 61 70 251	796 117 526 20 60 73	2 494 516 1 567 39 153 221

1980 CENSUS TRACTS

HOUSTON, TEX.

STANDARD METROPOLITAN STATISTICAL AREA





D Warehouse - A.A.

	Air	and On-site Popu	lation Targets			
Worksheet						
Distance From	Census	Estimated % of Tract	Population	Total	brack	
Site (Miles)	Tract #	Between Site Distances	Between Site Distances	Population		
On-site		_	θ	0		
0 -> 1/4	318.02	20	1,255			
•	3 25,02	5	312			
	327.02	15	619	2,186		
0 -> 1/4				2,186		
$\frac{1}{4} \rightarrow \frac{1}{2}$	318,02	20	1,255			
	325,01	10	231			
	327,01	15	918			
	327.02	2.5	1,032			
	325.02	10	625	4,061		
0 > 1/2				6,247		
Yz → 1	318,02	50	3,136			
: :	318,03	25	892			
	325.01	. 55	1,268			
. ;	325,02	30	1,873			
	326	10	1,873			
· ;	327.01	50	3.062			
:	327.02	60	2,475			
	3 28.01	20	1,454	14,824		
0 -> 1			,	21,071		
1->2	314,01	50	2,160			
:	3/4,02	50	1,832			
i ;	318,01	85	3,167			

627

318,02

10

FID Warehouse - PA

Air and On-site Population Targets

Worksheet						
Distance From	Census	Estimated % of Tract	Population	Total		
Site (Miles)	Tract #	Between Site Distances	Between Site Distances	Population		
1-2 (con4)	318,03	75	2,675			
	318,04	90	3,521			
water to be a second of the se	319.01	50	1,884			
	319,02	100	3,253			
	320,01	30	1,349			
	320,04	20	530			
	325.01	35	807			
	325,02	55	3, 4 35			
	326	70	4,646			
:	327,01	35	2, 1 43			
:	328,01	80	5,817			
:	328,02	95	4,672			
	328,03	40	1,536			
	329,02	5	247			
' (343.01	15	8 79	45, 180		
O → 2				66,251		
2-3	308	35	2,601			
:	309.03	15	467			
- :.	3/3,01	20	1,072			
: 1	313,02	60	3,259			
	314,01	50	2,160			
	314,02	50	1,832			
	315	35	2,136			
: !	317,03	55	1,998			
	317.04	100	6,189			
; ; - I	· ·					

A Warehouse - PA

Air and On-site Population Targets

Worksheet

Distance From	n Census	Estimated % Of Tract	Population	Total
Site (Miles)	Tract #	Between Site Distances	Between Site Distances	Population
2 > 3 (con't)	3/8,0/	15	559 .	
	318,04	10	391	
	319,01	50	1,884	
	320,01	7.0	3,148	
	320,02	90	2,141	
	320,03	10	523	
	320,04	80	2,122	
	321,01	40	3,538	
:	324,01	90	2,983	
	324,02	10	917	
	324,03	20	11	
:	324,04	100	4,666	
	326	20	1,327	
	328.02	5	246	
•	328,03	60	2.304	
	329,02	65	3,214	
	3 29.03	60_		
م حمله شاهد در بروسته بازی میسید میسید میسید میسید.	330,02		2,633 1,595	
	7	40	1/3/13	
	339,03	85	1762	
- 	340	5	1,762	
	343,01	85	4,982	
	343,02	15	1,851	
	344	40	1	65770
<i>0</i> → 3		, ,	00/	65,720
			V	

AJD Warehouse -PA

Air and On-site Population Targets

		Worksheet		
Distance From	Census	Estimated % Of Tract	Population	Total
Site (Miles)	Tract #	Between Site Distances	1	Population
3 > 4	302	15	998	
	304.02	10	5 21	
	305,01	15	637	
	305,02	85	3,613	
	307,01	10	578	
	307,02	100	4,900	
	308	.65	4,830	
	309,01	25	1,512	
	309,02	60	1,852	
	309,03	85	2,643	
	312	5	390	
	3/3.0/	80	4,287	
	313,02	40	2,173	
-	315.	55	3,356	
·	317.02	80	311	
	317.03	45	1,635	
.:	320,02	10	238	
	320,03	85	4,446	
	321,01	60	5,308	
	321,02	25	543	
;	323.01	80	4.087	
	323,02	10	399	
	324,01	10	33/	
1	324,02	70		str
	324,03	70	37	
		Tan Living		Endinger.

Air and On-site Population Targets

Worksheet Total Distance From Census Estimated % Of Tract Population Site (Miles) Tract # Between Site Distances Between Site Distances Population 3 > 4 (con4) 329.01 45 2 329.02 30 1, 484 40 329.03 1,755 80 330,01 60 330,02 2,392 65 339.02 4,111 15 339,03 311 340 40 3, 240 342 89 10 343.02 80 9,874 344 40 804 346 80,527 10 405 212,498

Ref. 3

CERCLIS #: TXD987966066

SITE ASSESSMENT REPORT

FOR

ABANDONED DRUMS AT
I.D.C WAREHOUSE (FORMERLY A.I.D. WAREHOUSE)
Houston, Harris County, Texas

Prepared for

EPA - Region VI Emergency Response Branch

J. Chris Petersen Deputy Project Officer

By

Ecology and Environment, Inc.
Technical Assistance Team

May 25, 1988



ecology and environment, inc.

1509 MAIN STREET, SUITE 814, DALLAS, TEXAS 75201, TEL. 214-742-6601 International Specialists in the Environment

recycled paper



ecology and environment, inc.

1509 MAIN STREET, SUITE 814, DALLAS, TEXAS 75201, TEL. 214-742-6601

International Specialists in the Environment

DATE:

May 25, 1988

CERCLIS #: TXD987966066

TO:

Pat Hammack, OSC

EPA Region VI, Emergency Response Branch

THRU:

J. Chris Petersen, DPO

EPA Region VI, Emergency Response Branch

THRU:

Kishor Fruitwala, TATL

Region VI, Technical Assistance Team

FROM:

Richard Yeager

Region VI, Technical Assistance Team

SUBJECT:

Abandoned Drums at I.D.C. Warehouse (formerly A.I.D. Warehouse)

Houston, Harris County, Texas

TDD #: TO6-8805-08 PAN #: TTX 0777 SAA

I.D.C. Warehouse (formerly known as A.I.D. Warehouse), located at 7198 Mykawa Road in Houston, Texas, was the subject of a TAT site assessment on May 19, 1988. The purpose of the assessment was to update the current condition of 91 overpacked drums at the warehouse. TAT members Richard Yeager, Holly Gray, Charles Wisnieski, and Jorge Aguirre participated in the assessment. TAT was accompanied by OSC Pat Hammack.

Background

The contents of the overpacked drums at the warehouse are known to be pesticides and pesticide formulation products. Region VI EPA first became involved with the material when the material was being shipped by train to the Houston area in 1984. Several of the containers broke during the shipment and Conservation Services, Inc., owners of the materials, accepted responsibility for the cleanup. All of the materials were overpacked and later transferred to a warehouse for storage and subsequent export. In March 1986, the drums were relocated to the A International Distribution (A.I.D.) Warehouse, at 7198 Mykawa Road, in Houston, Harris County, Texas. (The A.I.D. Warehouse has recently changed its name to the International Distribution Company (I.D.C.) Warehouse). Due to the contents and deteriorating condition of the drums, EPA and Texas Water Commission (TWC) have visited the I.D.C. Warehouse several times to perform site inspections.

TDD #: T06-8805-08

Page 2

Ownership of Warehouse

The I.D.C. Warehouse is rented by I.D.C. The property management firm which manages the property is Trammel Crow Company, located in Houston, Texas. The property is owned by New England Life. (See attachments for details).

Trip Narrative

TAT performed a site assessment at the I.D.C. Warehouse facility on May 19, 1988. Upon arrival at the facility, TAT and OSC Hammack spoke with Mr. Jim Walt, son of the company's president. The OSC explained to Mr. Walt about the possibility of a federal removal of the drums. Mr. Walt stated that 26 drums of chlorobenzilate and 5 drums of Tillam were removed from the warehouse by Oregon California Chemical Company. He also said that the drums, which are normally stacked (2 drums high) were unstacked for EPA's convenience.

TAT then proceeded to the area of the warehouse where the drums were stored. TAT dressed in safety level "B" to perform air monitoring with the Organic Vapor Analyzer (OVA), O_2 Meter/explosimeter, Radiation Alert Monitor (RAM) IV, HCN and H_2S monitoxes, and HCN draeger tubes. The only instrument which showed any readings above background was the OVA. The following readings were detected directly above the tops of the drums:

Benzene - several drums	200	- 500 ppm
Diethyl Sulfate - one drum	120	bbm
DDT - one drum	10	ppm
Isobutyronitrile - one drum	100	ppm
Boiler Water - one drum	3	ppm

TAT then numbered the drums from 1 to 91 with white spray paint. The drums were located on pallets, mostly 3 drums to each pallet. After numbering the drums, TAT proceeded to record the condition and contents of each drum. The contents of each drum had been marked on the drums by a magic marker, probably at the time they were overpacked. Of the 91 drums, the contents of 4 of the drums could not be determined either because the labels were no longer legible, or the labels may have been positioned where they could not be read.

Drum Inventory A.I.D. Warehouse

Contents	Number of drums
ALFUL	ı
Amonic Surfactant	1
Atlox 3404F	1
Benzene	6
Boiler Water	2

TDD #: Page 3 T06-8805-08

Chloral	5
Chlorobenzene	1
Crystal Inhibitor	2
Dichlorobenzene	2
2,4, Dichlorophenoxy Acetic Acid	2
Diethyl Sulfate	. 13
Dimethyl Sulfate	1
DDT	7
Epichlorohydrin	· 1
Isobutyronitrile	13
Methanol	7
Methyl Sulfate	' 1
Methyl Pyrophosphate	1
Naled (organic phosphate mixture)	1
Naphtha	1
Tergitol	1
Toxaphene	6
Trimethyl Phosphate	2
1,1,1 trichloroethane	1
Xylene	8
Unknowns	
Poison "B" UN2810	1
Poison "B" Liquid	ı
Poison	1
Nothing Legible	1
Total	91

TDD #: T06-8805-08

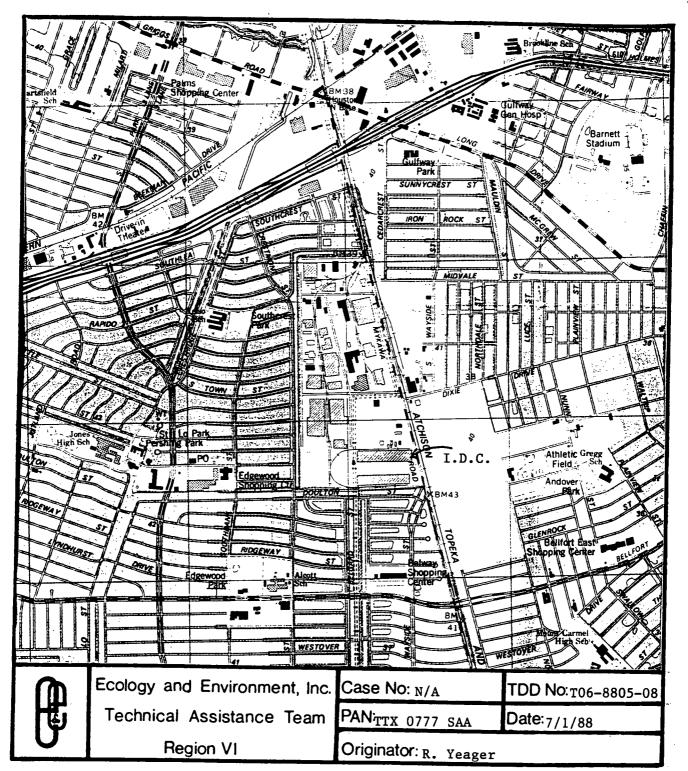
Page 4

This inventory compares fairly well with previous inventories performed at the warehouse. Three of the drums were classified as being in poor condition, which were badly rusted, dented, or contained corrosion holes. Twenty-three were classified as fair and sixty-five were in good condition.

On June 10, 1988, TAT Yeager was informed by Pat Hammack that a PRP removal of the drums would be performed.

Attachments:

Location Map (USGS)
Site Sketch
Mounted Photographs
Unused Photographs and Negatives
TAT Field Notes
Site Safety Information for OSC Site Visit
Records of Communication
Title Search Information
IDC Current Inventory
Threshold Limit Values for IDC Abandoned Drums
Copy of TDD #: T06-8805-08

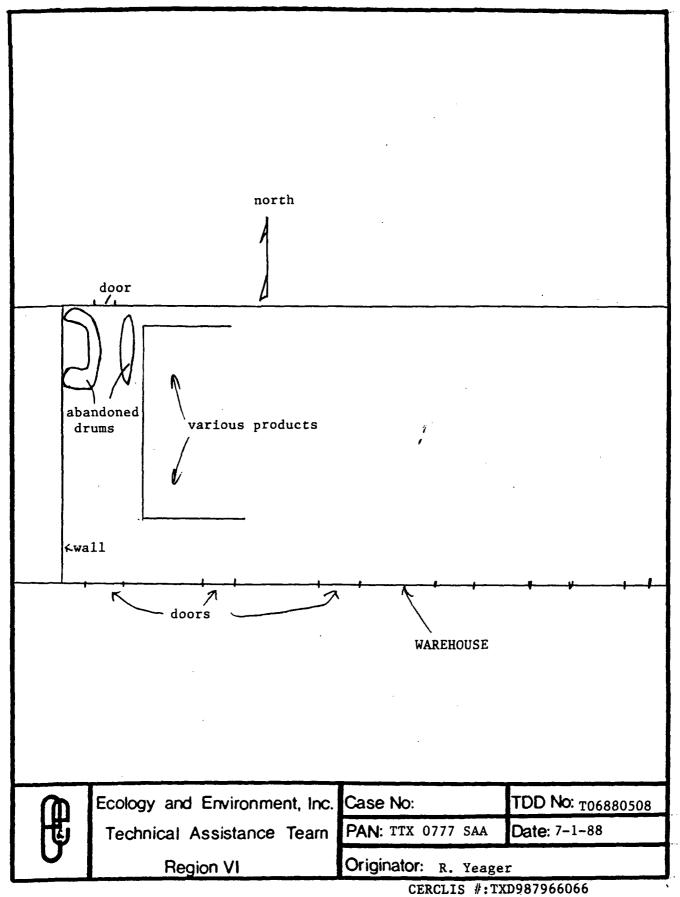


CERCLIS #: TXD987966066

I.D.C. Warehouse Houston, Harris County, Texas

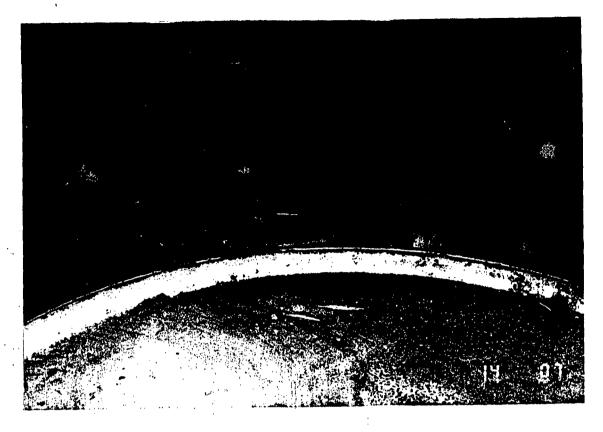
PARK PLACE QUADRANGLE TEXAS-HARRIS CO. 7.5 MINUTE SERIES (TOPOGRAPHIC)

l	1		SCA	LE 1:24 0	000		1 MILE
recycled paper	3	1000	2000	3000	4000	5000	6000 FCOlogy and environment
•	1	5		0			1 KII OMETER



SITE SKETCH
I.D.C. WAREHOUSE

(not to scale)

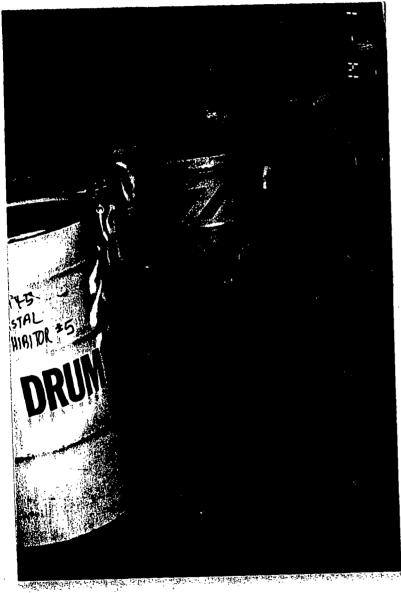


TDD#: T06-8805-08	Pg. 1 of 12
PHOTOGRAPHER/WITNESS	# <u>6 -</u> Roll #1
R. Yeager/C. Wisnieski	
DATE/TIME/DIRECTION	
5-19-88/1406 hours/S	
COMMENTS: Corroded top of	drum #12 (marked as
"poison", no other markings	visible).

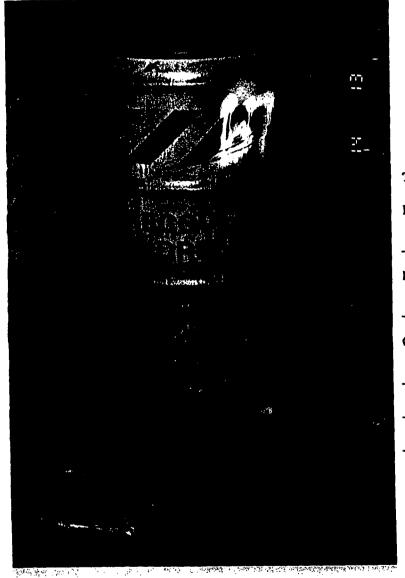
:



TDD#: <u>T06-8805-08</u>	Pg. 2 of 12
PHOTOGRAPHER/WITNESS	# <u>9 -</u> Roll #1
R. Yeager/C. Wisnieski	
DATE/TIME/DIRECTION	
5-19-88/1410 hours/S .	
COMMENTS: Rusted drum lids.	



TDD#: T06-8805-08	Pg. 3 of 12
PHOTOGRAPHER/WITNESS	# <u>10 -</u> Ro11 #1
R. Yeager/C. Wisnieski	
DATE/TIME/DIRECTION	
5-19-88/1411/NW	
COMMENTS: Drum in poor condition	on, containing
Diethyl Sulfate.	



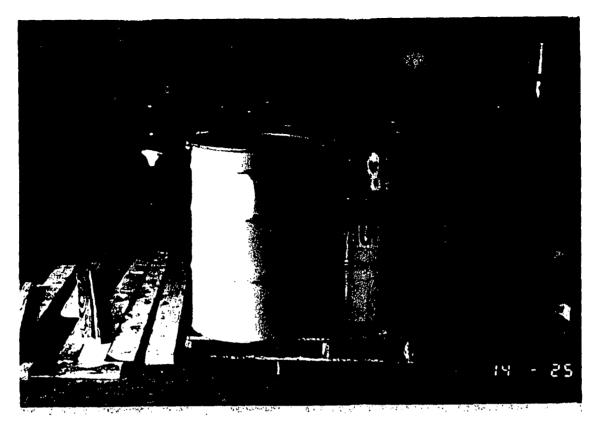
TDD#:	8805-08	Pg4	of -12
PHOTOGRAPHE	R/WITNESS	# <u>12 -</u> Ro	oll #1
R. Yeager/C	. Wisnieski		
DATE/TIME/D	IRECTION		
5-19-88/141	3 hours/SW		
COMMENTS:	Drum #67, containing	"Boiler Wate	r."



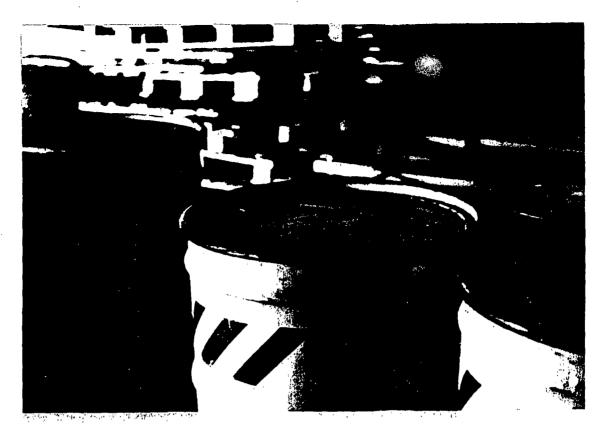
TDD#: <u>T06-8805-08</u>	Pg. 5 of 12				
PHOTOGRAPHER/WITNESS	# <u>13 -</u> Roll #1				
R. Yeager/C. Wisnieski					
DATE/TIME/DIRECTION					
5-19-88 /1413 hours/S					
COMMENTS: Ring and top	of drum are bent on drum				
#66, containing toxaphene.					



TDD#: T06-8805-08	Pg. 6 of 12
PHOTOGRAPHER/WITNESS	# <u>4 -</u> Roll #2
R. Yeager/C. Wisnieski	
DATE/TIME/DIRECTION	
5-19-88/1422 hours/E	
COMMENTS: Benzene drum from whi	ich readings of 500
ppm were detected just above the	e top of the drum.
	



TDD#: <u>T06-</u>	8805-08	Pg. 7	of <u>12</u>
PHOTOGRAPHE	R/WITNESS	# <u>7 -</u> Ro	11 #2
R. Yeager/C	. Wisnieski		· · · · · · · · · · · · · · · · · · ·
DATE/TIME/D	IRECTION		
5-19-88/1425	hours/E		
COMMENTS:	Benzene drums, hi	lgh OVA readings.	
			



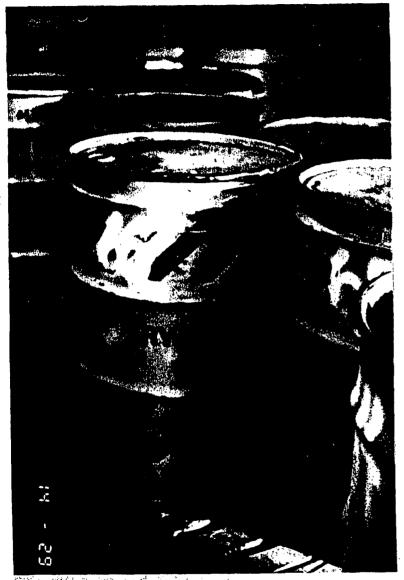
TDD#: <u>TO</u>	6-8805-08	····	Pg	٠	8	of	12
PHOTOGRAPI		# _	# <u>9 -</u> Roll #2				
R. Yeager	/C. Wisnieski			·			
DATE/TIME	DIRECTION						
5-19-88/	1426 hours/SW						
COMMENTS:	Drums with	missing	bung,	conta	ain	ing	
"boiler w	ater."						
	<u> </u>						



TDD#:	8805-08		Pg.	9	_ of .	12
PHOTOGRAPHER	/WITNESS		# 10	Ro	11 #2	?
R. Yeager/C.	. Wisnieski	L				
DATE/TIME/DI	RECTION					
5/19/88/142	7 hours/SE			·		
COMMENTS:	Drum 69,	containing	dichlor	obenz	zene	
·						



TDD#: _T06-8	805-08				Pg.	10	of <u>12</u>
PHOTOGRAPHER/WITNESS					#	<u>1 -</u> R	o11 #2
R. Yeager/C	. Wisni	esk	<u>i</u>				
DATE/TIME/D	IRECTIO	N					
<u>5-19-88/1428</u>	hours/	'N					~
COMMENTS:	Drums	71	and	73,	containin	д Тоха	phene.
	············						
	·· ·· · · · · · · · · · · · · · · · ·						,



TDD#: <u>T06-8805-08</u>	Pg. 11 of 12
PHOTOGRAPHER/WITNESS	# <u>12 -</u> Roll #2
R. Yeager/C. Wisnieski	
DATE/TIME/DIRECTION	
5-19-88/ 1429 hours/NW	*
COMMENTS: Toxaphene	



TDD#: <u>T06</u> -	-8805-08		Pg.	12	_ of	12
PHOTOGRAPH	er/witness	i	#	3	Roll	#2
R. Yeager/	C. Wisnieski					
DATE/TIME/	DIRECTION					
5-19-88/	1429 hours/S					
COMMENTS:	Position . of	drums.			<u> </u>	
			·			

E & E Job Number .		•
Telephone Code Number _		
Site Name	AID Warehouse	
State/City_	Hoesta, TX	
TDD_	706-8805-08	
SSID	TXD 98 7966066	
	5-19-88 1 5-19-88	
	Book of _	

5-19-88 A.I.D. Warehouse +06 8805 08 5-19-88 AID WAREAGUSE TO6-8805-08 0100 Houston TAT left office for auchouse (AIQ). Team wanter: R. Gegar Tean Rada; Hally Gray; Site Sufet; Wisnesdy on Jonge aquire team, membels. Verther condition: Brifly 1100 hours Loga and Wisnieghil existed Sucan area. Result - sovaral dengene duns were cenity a game mapore - blighest reading the top of the drives was 200-500 ppm. Nog readige were readed near walking areas freger isles surshine, mid 70's of calm winde, Cumil, at facility Dighert reading on diethly sulfatt - 120 ppm. Decided to go back in in Letel B to complete in suitaing. No readings were recalled in the drager table abone jobaty drens A federal remarks of the change Mr. With all infamilies that 26 dress of chlorologicals and 5 leurs of tellow were picket up by O regen The RANTE didnot go off care out of dren max readings on top of DDAT drund were 10 ppm. Max reading any one 150 by tyn was 7100 ppm. One dum Diethol sufforte 7100 ppm. These drum were cotaloqued in layel B. The only other drume which alad OVA roadings already catalogued are the benjere dienes boiler water These RNY boiler water was nox 13 ppm. The bengere realizer indicate that yer can safely downgrade to level C with PAPRS st remain beller TLU 1230 broke for lunch 135 General Wisniesti re-entered that me to Calpleto inecutary in Level C, w/ PARS The dume were numbered in White Spray drund were marled in magic markers These 1006 Set up and colibrated Explain /Oz meta OUA - calibrated 1/16/88, SN 7949, church contests, along with the condition of each dum, enous poted. Mostol the drube are

			•	
	519-58 AID Warehinge	TO6 8805 0 8	5-19-88 A.D. Warehouse	TO 6 8805.08
	are fady deteriorated.	30	^	
	Inventory of Dreams:			good Lair
	Com	dition 32	_ / (/ / / /	good
	1 Diethyl Sulfete	Good 33	11 1	good
:	2 Diethyl Sulfale	fair 34		Good
	3 Xylene	fair 35	chloral	fein-top rusted
	4 Isobutylaitrile	fair, 36		good
	5 DOT 3-50 # bays in overpack	good 37		Fair - top rusted
		500d 38	Methyl Sulfate	good
	7 Methand (top at drum says Benzene)		methanol (30 gal drum)	geid
	8 Tergital	good 40		Good
	9 XyTene	fair 41		fair-rusted top
	10 Chloral	fair 42	· /· / - / - / -	good
	11 Methanol	good 4	3 Toxaphene	good
	12 marked as "poison" ne other markings legisle	poor - corrosion hale in top 4	4 Poison's" liquids, no other marking	good
	13 Xylene	good 4	5 Orcharobenzene	good
	14 2, 4 Dichlorophenoxy Acetic Acid	a(z).	6 Trimethyl Phosphate	good
	15 Methanol	fair 4	7 Crystal Inhibitor	good
	16 Chloral		18 Binzene	good _
	17 Isobytylnitrile	good	9 Crystal inhibitor, goo RNY	good
	18 Chloral	good	50 Diethyl sultate	good,
	19 Orzan-A (DOT on top of Drum), 3- 20 Diethyl Sulfak	50thyr good . 3	TI Diethyl salfate	poor grusted top,
		good	, s	sides bedly corroded
	21 Isobuty/nitrile	Good	be	it no heles visible
	22 DDT	good, 5	2 Waste Toxaphene	fair - rusted top
	23 Diethyl Sulfate	good 5	3 tsobutyronitrile,	good
	24 Diethyl Sulfate		4 Isobutyronitrile	· Fair -rusted by
	25 Isobutyronitrile	good 55	5 Methanol (30-gal drum)	good
	26 Bengene	good 5	6 Trimethyl phosphete 7 Isobutyronitrile	fain-justed hop
	27 Isobutylnitrile	good 5	7 Isobatyronitrile	good
	28 1,1,1 Trichloro ethane		8 Methano! (30 galdrum)	lain
	29 NALED 30 gal dremin		9 Isobutyroaitrile	tain
	overpack, topof drum som "one	Amie P.K. Awate Machine	o A. 16.1 S. 16.1.	^ <i>"</i>

•

5-19-88 All Warehouse 706-880508 5-19-88 AID Warehouse 706 88050 2,4 pichlorophexnoxy Acetic Acid good It'should be noted that the present unestay lead comed by the AID wave house indicate 92 Methanol docd Isobuty al Nitiale (Sp?) drums are prosent. Also, "Isobutyronitrile" is sometimes 64 Xylene bung missing Boiter Water poor I overpack: HTRNY 133045 Yeager And Wisnieski completed Inventory. 65 Toxaphene lid is dented Came out of drin area for a preak. Boiler Water fair 1400 Yeaght and Wishkski returned to drum over to take pictures 68 rufting legible 69 Chlorobenzene photolog DOT. Toxaphene 1328 N Scan of dring looking horth # (Chloral A/A 42 1378 N Toxaphere A/A(1-3 taken by osc) #3 1329 N Diethel Sulfate view of druns 44 1406 SW Diethelo Salfete mis lire **#**5 Diethel Sulfate 46 1407 S corroded top of dum #12 Dimethyl Sulfale 1408 W group of drums H8 1409 NE BOAZONE drum which kid an OVA Xylene TOXA THE PRIVITOXAPHENE vending of 500 ppm on the top of the drum (00) ton possibly dripp #9 ruid W Rusted lids on drums 35+37 on side bod leale? or leaded in past. 4 10 1411 NW Rusted drum #51 # 11 1413 ENY 1 Prom # (5 4) Bung missing (NU) DDT Benzene H12 1413 SW Orm #67 , ras ted # 13 1413 S Prom # 66 ring on overpack lid is bent Benzene ALFUL 84 ? Methyl Parophosale 85 I>obutylnitrile 86 Naptha View of Drums NW "ORZAN-A" 1421 \mathcal{W} Drum 12, corroded top 1422 8 K7 Ppi Chlorohydrin bengene dur, high ~ 500ppm dealigs 422 Xylene 45 1423 $\mu \omega$ azim 32 Dimethyl Sulfate 1424 Corroded Benneul

AID Warehouse TOG 880508 5-19-88 Dun 67 # 8 1426 SW Drum W/ open bung 49 1426 SE #10 14247 SE Drun 69 # 1.1. 1428 N Draws 7.3+71 412 1429 NW Drim 66 Ware Louse # 13 1429 5 # 14 1430 NW 14 1430 NW

1430 THT exited hotcome after photo session

THT Holly Gray spoke with wavehouse Manager

and out reading from chana, THT then

proceeded to pack the equipment. THT then

proceeded to pack the equipment. THT left

one 17-H D.O.T. reconditioned drawn with investigation

derived material (waste savanex, booties etc.) at

the wave bouse and marked it "THT WASTE" in white spray paint. We had sign permission of the wavelouse owners to do so.
1515 TAT 1eft the wavelouse for the Houston office.

SITE SAFETY INFORMATION FOR EPA OSC S	SITE VISIT
A. GENERAL INFORMATI	Inu
	••
SIE: A.I.D Warehouse	
LOCATION: 7/98 Mykowa Houston TX	
_	
DBXCIIVE(S): Conduct site Assessme	nt at Warehouse
PROPOSED DATE OF INVESTIGATION: 5/19/88	
BACKGROUND INFORMATION: Complete: V Preliminar	y (no analytical data available)
DOCUMENTATION/SUMMARY: Overall Hazard: Serious:	Moderate:
Low:	Unknown:
•	•

recycled paper

rolegs and entirement

B. SITE/WASTE CHARACTERISTICS

WASIE TYPE(S): Liquid X Solid Sludge Gas X
CHARACTERISTIC(S): Corrosive X Ignitable Redioactive Volatile
Toxic V Reactive X Unknown Other (Name)
•
FACILITY DESCRIPTION: (include type of operations) This facility is an active
wavehouse
Principal Disposal Method (type and location): 5 forage only in 80 gallon overpack steel atums.
gation overpook steel atoms.
Thursual Features (dike integrity, power lines, terrain, etc.): Allof Acros
unusual Features (dike integrity, power lines, terrain, etc.): All of downer we in a wavehouse. The druns are secured but
the warehore is active.
Statua: (active, inactive, unknown) part of warehouse is active
History: (injury, complaints, previous agency action): 123 brung (overpreha)
stoned at A100 wavelouse contain various overprotes
containers. The containers hold a ranety of
The chemicale were overpaded in 1984 I have them
The chemida were overpaded in 1914 like to them
store during their shipment, the continuers were damaged.
The draws have been located at the AID warehouse
some such the drawn of some of
since 1986. sail of the want of the
since 1986. Some of the druns shows signs of corrosion. Odor has been detected from the
drune by TWC in November 1987

DECONTAMINATION PR	QCEDURES: Will establis	la decontamination reduction and
meeting the	a site. Standard	Decompos timela R. Cank D
		and since Author
ERSONAL: Wash	buchets & rince for Sterilizer for	chet for bet Rise Justit
Special Equipment	, Facilities, or Procedures:	Hard hat must be worn -
THE ENTRY PROCEDU	RES AND SPECIAL CONSIDERATIONS	i: warehouse will be treated and confined-opone only
ORK LIMITATIONS (Time of day, Weather Condition Suring daylight for	es etc.): work slould be
nvestigation-peri leone at he	ved material disposal: <u>Dru</u> grehouse. This incl	un in 17-4 drum and water Grow the
1	eam Member	
	Richard Yeager Hally Gray Manieshi Wirnieshi	Responsibility Team Leader Site Safety Coordinator Menfer Menfer

C. HAZARD EVALUATION

The oversech drews contain narious materials
the similarities of continued to
(HCN generator), diethyl sullate paraguat, para thin trimethyl phosphate, chlorobenzilate, diethyl sulfate,
(HCN generator) diethyl sullate paraguat, parathion
trimethyl shosphate, chlorobenzilate, diethyl salfate,
bennere, xylène. Characteristics of these various cleminale include: Conosinelless
various clemisale include: Conosineless
pyrostone Hammable, Cancingenie
and a cilità to generate HCN. Servel containe
has been Inhanced with compasion Cales
(from inside -out). Several chemicals are readily
absorbed through the shine
· ·
Contact with drums or any national spilled on
Contact with drives or any natural spilled on the floor should be availed.
ATWC employee stated that at least me drum was emitting an odor.
was mitting an odor.
·

D. SITE SAFETY WORK PLAN

PERIMETER ESTABLISHMENT: Map/Sketch Attached? No Site Secured? Ves
Perimeter Identified? No Zone(s) of Contamination Identified? Ves
Work Areas Designated? <u>no</u>
will establish perincter and work areas upon arrival. Decontamination reduction was well be located outside of
Decontamination reduction use will be located outside of
PERSONAL PROTECTION:
Hodifications: Will use saranex hoods - will tape to Gree mask.
Modifications: will use saranex hoods - will tape to
Gree mask of the state of the s
Surveillance Equipment and Action Levels: Wind direction indicator (i.e., surveying
RAMIT, OVA, explosimeter, Has and HCN monotox.
RAMITY OUA explosing to HS a larry monetar
detectors.
•

E. EMERGENCY INFORMATION

(Use Supplemental Sheets if Necessary)

EMERGENCY PRECAUTIONS

Acute Exposure Symptoms	First Aid
Hen-difficult breathing, palpitation, paralysis, unconsumences, death	Transfer person from onvironments remove all clothing and wrap in a
presticide - fever, eyanosis, pulmonay adema, coma, shock death Bonzene	Trigate eyes CPR, as wash with soap and water A/A, no adrenalin
	· · · · · · · · · · · · · · · · · · ·
LOCAL RESOUF (Name, Address and F	
mbulance 911	
ospital Emergency Room Hermann Hosp	oita 1 1203, Ross Starling, 797-4060
oison Control Center 654-1701	<i>y</i>
olice (incl. Local, County Sheriff, State) <u>Ho</u>	us la Police Apt 911
ire Department 1 tous to Fire Dept	911
irport Hobby	
xplosives Unit Fire Apartment HAZ	_ 1 .,
	EPA Pat Hammack 214-655-2270
ocal Laboratory <u>EPA Lab 6608 Hornwoo</u>	
PS/Federal Express /huston Offic lient Contact N/A	
	verehouse (45-4080
SITE RESOUR	CCES
elephone Location, Number wavehouse #	Fuil bring all water needed
ther	

Emergency Routes

Directions to Hospital (incl. MAP) Turn north () on Alykawa RI
proceed, mile to Loop 610. Go West on 610 to 288. Farn north
on 288 towards lowntown. Exit 288 and Holcombe Rlud.
Turn the right on Fannin to Proceed to Ross Sterling
avance and take a right. Hermann hospital will be on the left 1203 Ross Steeling Road.
Other
<u> </u>
<u> </u>

meyeled proper

F. EQUIPMENT CHECKLIST

PROTECTIVE GEAR	•	•	
LEVEL A		LEVEL B	
SCBA		SCBA	<u>x</u> .
SPARE AIR TANKS		SPARE AIR TANKS	<u> </u>
ENCAPSULATED SUIT		CHEMICAL RESISTANT COVERALLS	<u>X</u>
SURGICAL GLOVES		PROTECTIVE COVERALL	J
NEOPRENE SAFETY BOOTS		(1YPE_Saranck)	x (aucilable)
8001 IES		RAIN SUIT	
CLOVES (TYPE)		SURGICAL CLOVES (Acoprene (avail)	
OUTER WORK GLOVES		Aitrile	<u> </u>
HARD HAT		GLOVES (TYPE)	<u>X</u>
CASCADE SYSTEM		OUTER WORK GLOVES	\overline{x}
		NEOPRENE SAFETY BOOTS	
	~~~	8001 IES	X
		HARD HAT WITH FACE SHIELD	
		CASCADE SYSTEM	
	•	MANIFOLD SYSTEM	<del></del>
LEVEL C		LEVEL D	
ULTRA-IWIN RESPIRATOR	<u>×</u>	ULIRA-IWIN RESPIRATOR (AVAILABLE)	
POWER AIR PURIFYING RESPIRATOR	$\overline{\lambda}$	CARTRIDGES (TYPE)	
CARTRIDGES (TYPE GMP )	4	ROBERISHAW ESCAPE MASK (AVAILABLE)	
ROBERTSHAW ESCAPE HASK	_X_	CHEMICAL RESISTANT COVERALLS -	
CHEMICAL RESISTANT COVERALLS.	•	PROTECTIVE COVERALL	•
PROTECTIVE COVERALL		(1YPE)	
(IYPE Swanex )	<b>×</b>	RAIN SUIT	
RAIN SUIT		NEOPRENE SAFETY BODIS	
BUTYL APRON	<u></u>	8001 IES	
SURGICAL GLOVES	_X_	WORK GLOVES	
GLOVES (TYPE neoprene)	$\times$	HARD HAT WITH FACE SHIELD	-
QUIER WORK CLOVES		SAFETY CLASSES	•
NEOPRENE SAFETY BOOTS	X		
HARD HAT WITH FACE SHIELD	<u> </u>		

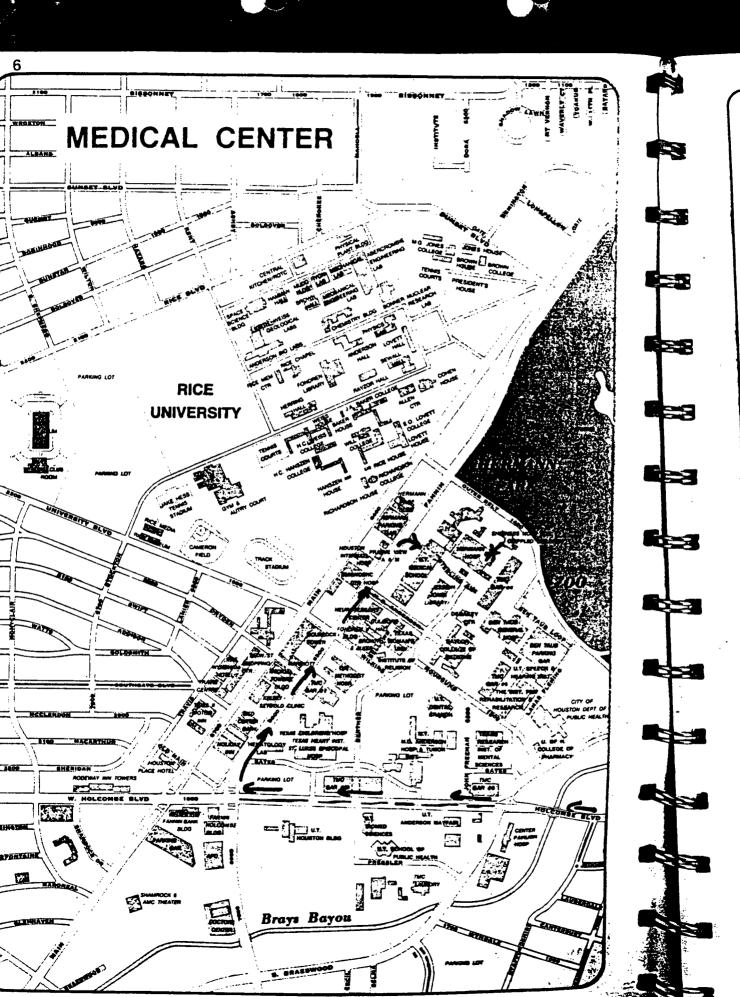
INSTRUMENTATION		DECON EQUIPMENT (CON1.)	
DVA	$\overline{\times}$	PLAST IC SHEET ING	<u> </u>
THERMAL DESORBER		1ARPS *	-
02/EXPLOSIMETER	<u> </u>	1RASH BAGS	<u>_X</u>
EXPLOSIMETER CALIBRATION KIT	·	1RASH CANS	
HNU		MASKING TAPE	
VICTOREEN 471		DUCT TAPE	<u> </u>
MAGNET OMETER		PAPER TOWELS	X_
PIPE LOCATOR	·	FACE HASK	
WEATHER STATION		FACE MASK SANITIZER	_X_
DRAEGER PUMP	<u>X</u> _	FOLDING CHAIRS	
BRUNTON COMPASS		STEP LADOERS	
RAMIX	X		
Hz5/HCN montoxes	_×		
,			
FIRST AID EQUIPMENT		SAMPLING EQUIPMENT	
FIRST AID KIT	<u>×</u>		
OXYGEN ADMINISTRATOR			
STRECHER			
PORTABLE EYE WASH	<u> </u>		
BLOOD PRESSURE MONITOR			
RADIATION BADGES	×		
FIRE EXTINGUISHER	<u>X</u>		
•			
DECON EQUIPMENT			
WASH 1UBS	<u> </u>		
BUCKE1S	<u> </u>		
SCRUB BRUSHES	_X_		
PRESSURIZED SPRAYER	<u> </u>		
DETERGENT (TYPE TSP )	X		
SOLVENI (TYPE)			

recorded made

ï

VAN EQUIPMENT		MISCELLANEOUS (CONT.)
100L KI1	<u> </u>	BINOCULARS
HYDRAULIC JACK		MEGAPHONE
LUG WRENCH	X	
10W CHAIN	X	
VAN CHECK DUI		•••
CAS	<del></del>	
	X	
ANI IFREEZE	Y	
BATTERY	<del>X</del> .	
WINDSHIELD WASH	X	
TIRE PRESSURE	X	
	<del></del>	
MISCELL ANEDUS		
PIICHER PUMP		
SURVEYOR'S TAPE	<del>~</del>	
100' FIBERGLASS TAPE	<u>X</u>	
300' NYLON ROPE		
NYLON STRING	·	
SURVEYING FLACS	<del></del>	
FILM	X	
WHEEL BARROW		
BUNG WRENCH		
SOIL AUCER	,	
PICK	<del></del>	
SHOVEL		
CATALYTIC HEATER	<del></del>	
PROPANE CAS	<del></del>	
BANNER TAPE		
SURVEYING METER STICK		
CHAINING PINS & RING		*
TABLES	•	
WEATHER RADIO		





Airport Na

Aero Fight Air' Andrau Air Pair Beaman Aron Bimp Base Clover Field Covey Traits & Ellington Air Farence Covey Traits & Ellington Air Farence Houston Gulf Hutil, Don, Air. Humphrey Air Humphrey Air Humphrey Air Humphrey Air Humphrey Air Men-Ada Ran La Porte Mur Lakeside Airt Lyndon B Jo May Airbort Model Airbiar Pearland Airt, Pearland

Alled Alam, Alled Addidated Ban, Alled Cy, Alled Cy, Alled Cy, Alled Mi, Alled Si, Alled Mi, Alled Mi

(Pelme Whee)

Originator

Conversation with:	Date: 5/ // 188
Name: Pat Hammich	Time: pa AM/PM
Company: EPA - asC	· · · · · · · · · · · · · · · · · · ·
Address:	Originator Placed Call
Dallas, Tx.	Originator Received Call
Phone: 214 -655 - 2270	W.O. No.:
Subject: Site Assossmat S/18 d M	9/88 For Polmar Whole & A- Ist! Dutect. Co. Whoe.
>=====================================	
Notes:	
	would like to conduct Ar
	L The A-Intle Distribution Co.
	The Palmer Warehouse next
wich on Wed	1 thurs : May 18-19 1988.
- DSC Hannach	las file data on both these
warelsuses, u	Will bring to Souston with line.
	nake a copy.
- S TAT began	search for background state on Here
facilities to	nepare for ste staty plan - for
site entry a	ssessment: - Sources:
	en Zelner- Old Weston File from Aug-5-Det. 1984
	- Made awargent & USIT & Proview LAD data 5-12-88 M
TWC - CK , f A	my uvolvenet - Ravior Heir Fik on 5-12-88 pm.
	Colled- Storad Spormach and whitever data Marie
	IN Nov. 1986 when project was again reviewed
In AID I	Lee.
The way	
✓ <b>7:1</b> 0.	Pollow-To Actions
<u></u>	·
Follow-Up By:	
Copy/Route To:	
	Originator's Initials: Wy

4 Thay

(Palmer whe IDC whee)

# Originator

Conversation with:	Date: 5/1/2/88
Name: Pat Hammych	Time: 1050/1055 AM/PM
Company: EPA - asc	
Address:	
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Phone: 479-598/	W.O. No.:
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Name: Doug Walt, President.	Time:AM/PM
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Originator

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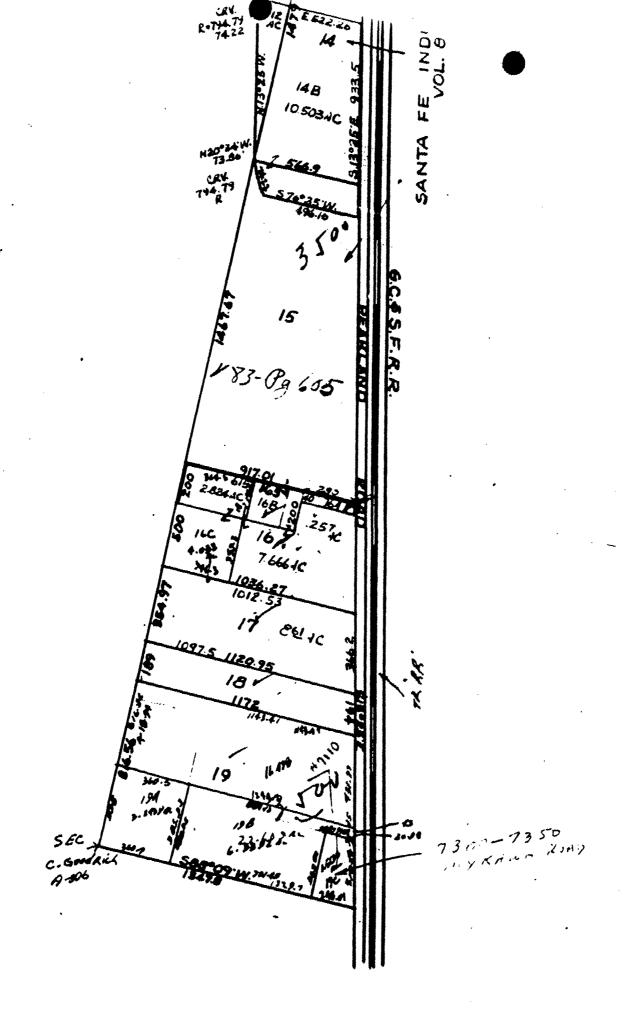
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I tract of land containing 11.498 acres out of the Henry B. Prenties League, abstract 56 (See Attached field Notes) Seed Chair: New Englan Mutual Lite Insurance Company 60 To interest by Deed dtd. 3/31/86 filed K. 469835 From A) My KAWA ROAD HOUSTON B.V. Subsegowt 40% interest by Deel Add. 10/11/19 filed G. 276334 from B) George A. Shutt by Deadto. 11/16/76 Lifed E. 955011 A) Robert T. Crow; Trammell Crow, Trustee for the Sturet M. CROW MANAGEMENT TRUST AND Robert E. Glaze. B) Crow-Shuff#9, a Texas partiesship by Deel dtd. 7/1/69 filed C. 940966 BROOK Theatre, INC. Votes Oxean hold and Kien interests as shown on Exhibit "A" of instrument filed G. 276334 (Text 1 av/y)



GF# 85-3531 RLB:ga

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K469835

HOLD TOR LAWYERS TITLE COMPANY OF HOUSTON 617 CAPOLINE, HOUSTON, TEXAS 77001

WD

GENERAL WARRANTY DEED

042-70-1226

(Property: 448-1007)

THE STATE OF TEXAS

COUNTY OF HARRIS

equal shares.

KNOW ALL MEN BY THESE PRESENTS:

THAT MYKAWA ROAD HOUSTON B.V., a Netherlands corporation (hereinafter referred to as "Grantor"), for and in consideration of the sum of Ten Dollars (\$10.00) cash in hand paid and other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged and confessed, has GRANTED, BARGAINED, SOLD and CONVEYED, and by these presents does GRANT, BARGAIN, SELL and CONVEY, unto NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, (hereinafter referred to, whether one or more, as "Grantee"), an undivided sixty percent (60%) interest in and to that certain tract or parcel of land in Harris County, Texas, being more particularly described on Exhibit "A" attached hereto and incorporated by this reference herein, together with an undivided sixty percent (60%) interest in and to the warehouse and all other improvements thereon, all fixtures thereon and therein, all rents relating thereto and all other rights, titles and interests appurtenant thereto (the said undivided sixty percent (60%) interest in and to the aforesaid being hereinafter referred to collectively as the "Property"). If Grantee is comprised of more than one person, the Property is conveyed hereby to each person in

This General Warranty Deed is executed by Grantor and accepted by Grantee subject to and upon the matters set forth on Exhibit "B" attached hereto and incorporated by this reference herein, to the extent that same are in existence and applicable to the Property (hereinafter referred to collectively as the "Outstanding Interests").

The address of Grantee is 501 Boylston, Boston, Massachusetts 02117.

TO HAVE AND TO HOLD the Property, together with all and singular the rights and appurtenances thereunto in anywise belonging, unto Grantee, and its successors and assigns, forever, and Grantor does hereby bind itself, its successors

GSG52-14 3/21/86

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DUPLICATION NOT AUTHORIZED WITHOUT THE WRITTEN PERMISSION OF THEE GATA, INC.

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042-70-1227

and assigns, to warrant and forever defend all and singular the title to the Property unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, subject only to the Outstanding Interests.

EXECUTED effective as of this the 25th day of March, 1986, but actually executed on the date sot forth in the acknowledgement below.

By Man 1. Home

Gary S. Grossman, its agent and attorney in fact

GRANTOR

THE STATE OF TEXAS S COUNTY OF HARRIS S

BEFORE ME, the undersigned authority, on this day personally appeared GARY S. GROSSMAN, agent and attorney in fact for MYKAWA ROAD HOUSTON B.V., a Netherlands corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity therein stated and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 24th day of March , 1986.

Notary Public in and for the State of Taxes

My commission expires

#### DESCRIPTION OF PROPERTY

Property: 448-1007

An 11.498 agree tract of land being out of the Henry B. Prentiss League and being part of that certain tract conveyed to Crow Shutt No. 9 by Deed recorded in Volume 7668, Page 583, Harris County Deed Records, Harris County, Texas, and being more fully described as follows:

BEGINNING at an "X" cut in concrete for the southwest corner of the herein described 11.498 acre tract of land; said point also being the northwest corner of a certain 3.2439 acre tract and being North 0 degrees, 02 minutes East 398.00 feet from the southeast corner of the Chauncey Goodrich Survey, Abstract 306;

THENCE, South 89 degrees, 58 minutes East 12%4.20 feet to a 1/2 inch iron pips set at the southeast corner of the herein described 11.498 acre tract, said point also being the north-east corner of a certain 6.33% acre tract, said point also being in the westerly right-of-way line of Mykawa Road;

THENCE, North 13 degrees, 27 minutes West along the Westerly right+of-way line of Mykawa Road, 431.97 feet to a 1/2 inchiron rod found for the northeast corner of the herein described 11.498 ages tract;

THENCE, South 89 degrees, 58 minutes, 39 seconds West 1143.47 feet to a 1/2 inch iron rod found for the northwest corner of the herein described 11.498 scretract, said point being in the easterly right-of-way line of a Houston Lighting and Power Company 100-foot right-of-way and in the west line of the Henry B. Prentiss League;

THENCE, South 00 degrees, 02 minutes West along the common line of the Houston Lighting and Power Company right-of-way and the herein described 11.498 acre tract, 418.94 feet to the PLACE OF BEGINNING and containing 11.498 acres of land.

Sanchit "A"

042-70-1229

#### OUTSTANDING INTERESTS

#### Property No.: 448-1007

- Easement granted to the City of Houston by instrument dated November 24, 1969 and recorded in Volume 8008, Page 377 of the Deed Records of Harris County, Texas.
- Easement granted to the City of Houston by instrument dated November 24, 1969 and recorded in Volume 8008, Page 380 of the Deed Records of Harris County, Texas.
- 3. Easements granted to Houston Lighting & Power Co. by instrument dated December 8, 1971, filed under Clerk's File No. D-490931 and recorded under Microfilm Code No. 138-29-0512 of the Official Public Records of Real Property of Harris County, Texas.
- Easement granted to the City of Houston by instrument dated September 4, 1951 and recorded in Volume 2331, Page 242 of the Deed Records of Harris County, Texas.
- 5. Easements described in Dedication of Private Easements dated March 23, 1973, filed under Clerk's File No. E-021207 and recorded under Microfilm Code No. 170-30-2176 of the Official Public Records of Real Property of Harris County, Texas.
- Easement described in instrument dated February 14, 1979, filed under Clerk's File No. F-969068 and recorded under Microfilm Code No. 120-86-1729 of the Official Public Records of Real Property of Harris County, Texas.
- Easements granted to Crow-Shutt #9 by instrument dated November 24, 1969, filed under Clerk's File No. No. F-963714 and recorded under Microfilm Code No. 119-98-2112 of the Official Public Records of Real Property of Harris County, Texas.
- 8. Agreement Among Tenants in Common dated November 8, 1976, a Memorandum of which is filed under Clerk's File No. E-955010 and recorded under Microfilm Code No. 153-04-2394 of the Official Public Records of Real Property of Harris County, Texas.

EXHIBIT "B" Page 1 of 2

- 9. The leasehold estate held by tenants in possession of space within the warehouse forming a part of the Improvements pursuant to leases, an Undivided Interest in which was this day specifically assigned to the Grantee, Purchaser or Assignee (as the case may be) named in the instrument to which this exhibit is attached.
- 10. Deed of Trust dated December 28, 1972, filed under Clerk's File No. D771070 and recorded under Microfilm Code No. 155-26-0904 of the Official Public Records of Real Property of Harris County, Texas from Crow-Shutt #9 to Jess Hay, Trustee, securing the payment of one note in the principal sum of \$2,000,000.00, payable as therein provided to The Mutual Benefit Life Insurance Company, and being additionally secured by Collateral Assignment of Landlord's Interest in Lease(s) dated December 28, 1972, filed under Clerk's File No. D771069 and recorded under Microfilm Code No. 155-26-0899 of the Official Public Records of Real Property of Harris County, Texas.

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STATE OF TOTAL

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MAR 3 1 1986



COUNTY CLERK.
HARRIS COUNTY, TEXAS

EXHIBIT "B" Page 2 of 2

2_..

SPECIAL WARRANTY DEED

1**41-**86-0**9**90

THE STATE OF TEXAS \$ \$ KNOW ALL MEN BY THESE PRESENTS:

THAT GEORGE A. SHUTT th mainafter referred to as "Greener", (. sunsideration of the sum of Ten Dollars not cash in hand paid and other good and valuable conassessment and sufficiency of which are hereby acknowledged and confessed, has GRANTED, BARGAINED, SOLD and CONVEYED, and by these presents does GRANT, BARGAIN, SELL and CONVEY, unto NEW ENGLAND MUTUAL LIFE INSURANCE COMPANY, a Massachusetts corporation (hereinafter referred to as "Grantee") an undivided forty percent (40%) interest in and to that certain tract or parcel of land in Harris County, Texas, being more particularly described in Exhibit "A" attached hereto and incorporated by this reference herein, and any and all other property owned or claimed by Seller adjacent thereto, together with an undivided forty percent (40%) interest in and to all buildings and all other improvements thereon, all fixtures thereon and therein, all rents relating thereto and all other rights, titles and interests appurtenant thereto (the said undivided forty percent (40%) interests in and to the aforesaid being hereinafter referred to collectively as the "Property").

This Special Warranty Deed and the conveyance hereinabove set forth is executed by Grantor and accepted by Grantee subject to and upon, but only upon, forty percent (40%) of the outstanding principal balance on those certain Promissory Notes described on Exhibit "B" attached hereto and incorporated by this reference herein, and the other matters set forth on said Exhibit "B", to the extent that same are in existence and applicable to the Property (hereinafter referred to collectively as the "Outstanding Interests").

It is expressly understood and agreed that this is a "subject to" conveyance only, and that Grantee has not, to any extent and in any respect, assumed any liability of any nature under the aforesaid Promissory Notes or under any other instrument described on Exhibit "B", including specifically but without limitation, any agreement to repay or perform, or any liability fc. the non-payment or non-performance of, either the indebtedness evidenced or secured thereby or any other obligation of any party thereto.

TO HAVE AND TO HOLD the Property, together with all and singular the rights and appurtenances thereunto in anywise belonging, unto Grantee, and its successors and assigns, forever, and Grantor does hereby bind himself, his heirs, personal representatives, successors and assigns, to warrant and forever defend all and singular the title to the Property unto the said Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof by, through or under Grantor but not otherwise, subject only to the Outstanding Interests.

EXECUTED this the 24 lay of September, 1979.

CROPCE & SHIPT

GRANTOR

RETURN TOI
MURRAY MCCOR
617 CAROLINE
RHOUSTON, TEXAS 77002

5841-79

141-96-0991

COUNTY OF Dallas 5

BEFORE ME, the undersigned authority, on this day personally appeared GPORGE A. SHUTT, known to me to be the person whose name is subjuribed to the foregoing instrument, and a prowledged to me that he executed the same for the hope and consideration therein expressed.

day of Saptember, 1979.

Notary Public in and for Dalles County, Texas

manustron expires:

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#### EXHIBIT A

#### TRACT ONE:

A tract of land containing 499,490 squite feet or 11.45 acres of indiamore or less, out of the H. B. Prenciss Reague, Abstract No. 17 in Harris 1011 Texas to being more particularly deact seed by term to outlos as follows:

Chauncey Goodrich Survey in the City of Houston, Harris County, Texas, said point being in the East line of the Houston Lighting & Power Company, 100 foot right-of-way, and the West line of Henry B. Prentiss League;

THENCE North 00° 02' East along the East line of the said Houston Lighting & Power Company 100 foot right-of-way, a distance of 390.0 feet, more or less, to the Southwest corner of the tract herein described and the place of beginning;

THENCE continuing N. 00° 02' East a distance of 418.54 feet to a point for corner and the Northwest corner of the herein described tract:

THENCE South 89° 58' East a distance of 1143.41 feet more or less, to a point for corner, said point being on the West line of Mykawa Road;

THENCE South 13° 27' Bast a distance of 431.81 feet, more or less, to a point for corner and the Southeast corner of the herein described tract;

THENCE North 89° 58' West a distance of 1244.82 feet, more or less, to the PLACE OF BEGINNING.

#### TRACT TWO:

All that certain 5.72 acres of land out of Lot 2, Block 3, Highland Industrial Park North according to the plat thereof filed at Volume 142, Page 4 Harris County Map Records as being more particularly described by metes and bounds as follows:

Commencing at the southeast corner of said Lot 2; Thence N 00° 34' E - 30' to a 1/2" iron rod marking the POINT OF BEGINNING of the herein described parcel;

THENCE N 89° 26' W - 546.82' to a 1" iron pipe marking the Point of Curvature of a curve to the right having a central angle of 32° 39' 59", a radious of 155.70;

THENCE along said curve for an arc length of 88.77' to a 1" iron pipe marking the Point of Compound Curvature of a curve having a central angle of 57° 27' 57", a radius of 293.31';

THENCE along said curve for an arc distance of 294.18' to a 5/8" iron rod marking the Point of Tangency;

THENCE W 00° 42' E - 35.82' to a 5/8" iron rod marking the Point of Curvature of a curve to the right having a central angle of 6° 59'.01", a radius of 298.31';

THENCE along said curve for an arc distance of 36.36' to a 5/8" iron rod for corner:

THENCE 8.89° 18' E - 763.51', along the south line of a 4.175 acre tract, to a 1/2" iron rod for corner;

 $\bigcirc$ 

41-96-1993

THENCE 5 00° 34' W - 342.53', along the west right-of-way line of Greengrass Drive (60' wide), to the POINT OF BEGINNING and containing 5.72 acres of land, more or less.

#### TRACT THREE:

All introduction 4.175 acres of land out of Loc 2, Block 3 Highland Industrial Cark North Living to the introduct filed at Marume and Page 4 Linky Map Records and being more page 4 Linky Map Records and bounds as follows:

Commencing at the southeast corner of said Lot 2; Thence N 00°  $34^{\circ}$  E -  $372.53^{\circ}$  to a  $1/2^{\circ}$  1ron rod marking the POINT OF BEGINNING of the herein described parcel;

THENCE N 89° 18' W - 763.51', along the north line of a 5.72 acre tract, to a 5/8" iron rod for corner marking a point on a curve having a central angle of 83° 00' 59", a radius of 298.31', the center of said curve being located on a radial line bearing S 82° 18' 59" E from said point;

THENCE along said curve in a northeasterly direction for an arc length of 432.22' to a 5/8" iron rod marking the Point of Tangency:

THENCE S 89° 18' E - 369.88' to a 5/8" iron rod marking the Point of Curvature of a curve to the left having a central angle of  $13^{\circ}$  56' 48", a radius of 401.98';

THENCE along said curve for an arc distance of 97.85' to a 5/8" iron rod for corner;

THENCE S 00° 34' W - 273.89', along the west right-of-way line of Greengrass Drive (60' wide), to the POINT OF BEGINNING and containing 4.175 acres of land, more or less.

#### TRACT FOUR:

All that certain property conveyed by deed from Warehouse Leasing Corporation to Crow-Shutt #9, a Texas general partnership, filed for record in the Office of the County Clerk of Harris County, Texas under Clerk's File No. D433440 and recorded under Film Code No. 135-21-1920 of the Official Public Records of Real Property of Harris County, Texas and described as follows:

A tract of land out of that certain 16.840 acra-Assact, mor less, out of the Peter Wilson Tract in the James Wharton Survey, A-871, Harris County, Texas, and being a part of that certain 32.559 acre tract of land conveyed by J. G. Miller and wife to Edmund L. Lorehn and Thomas H. Shartle by Deed dated April 15, 1946, recorded in Volume 1441, Page 306 of the Deed Records of Harris County, Texas, said 16,840 acres of land being the same tract described in Deed from the Museum of Fine Arts of Houston to Warehouse Leasing Corporation dated January 5, 1970, recorded in Volume 7883, Page 76, of the Deed Records of Harris County, Texas:

BEING 8.250 acres of land out of said 16.840 acre tract, and being more particularly described as follows:

BEGINNING at a point on the East right-of-way line of Silber Road, said point being the Southwest corner of said 16.840 acre tract;

THENCE North 0° 30' East, along the East right-of-way line of Silber Road, a distance of 370.47 feet to the Northwest Gerner of said 16.840 acre tract;

141-86-0994

THENCE South 88° 28' East, along the North line of said 16 84' acre truct, a distance of 969.74 feet to a point for corner in the center line of that certain 5 foot wide easement grant: 1 to United Gas Corporation by Deed dated March 17, 1958, recorded in Volume 3476, Page 182 of the Deed Records of Harris County, Texas;

THENCE South 0° 21' 30" That, Floring the center line of said only a policy of 5 root easement, a distance of 370.49 feet to a point for corner on the South line of said 16.840 acretract;

THENCE North 88° 28' West, along the South line of said 16.840 acre tract a distance of 970.66 feet to the PLACE OF BEGINNING and containing 8.250 acres of land.

#### EXHIBIT B

#### TITLE EXCEPTIONS WITH RESPECT TO TRACT ONE:

- 1. The lien for ad valorem taxes for 1000 the same of the lient taxes for 1000 as tenants under recorded or annual decided.
- 3. Unobstructed water line easement 10 feet wide of which 5 feet is located along the South 5 feet of the West 360.5 feet of the Property granted to the City of Houston by instrument dated November 24, 1969, recorded in Volume 8008. Page 377, of the Deed Records.
- 4. Unobstructed water line easement 10 feet wide of which 5 feet is located along the South 5 feet of the East 883.7 feet of the Property granted to the City of Houston by instrument dated November 24, 1969, recorded in Volume 8008. Page 380 of the Deed Records.
- Unobstructed easement 10 feet wide located 15 feet south of the north property line and extending in a westerly direction from the east property line a distance of 610 feet and an unobstructed aerial easement 5 feet wide from a plane 20 feet above the ground upward located south of and adjacent thereto granted to Houston Lighting & Power Co. by instrument dated December 8, 1971, filed December 30, 1971, under Clerk's File No. D490931, F.C. 138-29-0512.
- 6. Unobstructed easement 10 feet wide located on the west property line a distance of 44.6 feet south of the northwest corner and extending in an easterly direction for a distance of 14.4 feet and an unobstructed aerial easement 5 feet wide from a plane 20 feet above the ground upward located adjacent thereto granted to Houston Lighting & Power Co. by instrument dated dated December 8, 1971, filed December 30, 1971, under Clerk's File No. D490931, F.C. 138-29-0512.
- Sanitary sewer easement 15 feet wide located along the north property line granted to the City of Houston by instrument recorded in Volume 2331, Page 242 of the Deed Records of Harris County, Texas.
- Private Easement 35 feet wide located along the south property line for pedestrian and vehicular passage as described in that certain Dedication of Private Easements dated March 22, 1973, filed November 14, 1973, under County Clerk's File No. E021207, F.C. 170-30-2176.
- Perpetual and non-exclusive easement for the purpose of a railroad tract, location described by metes and bounds therein, granted by instrument dated February 14, 1979, filed February 15, 1979, under County Clerk's File No. F969068, F.C. 120-86-1729.
- 10. Unobstructed easements for 2 sanitary sewer lines and 1 gas line and an easement for road or street with the right to install and maintain a water line in aid road or street all as shown on plat attached thereto granted to Crow-Shutt #9 by instrument dated November 24, 1969, filed February 12, 1979, under County Clerk's File No. F963714, F.C. 119-98-2112.
- Deed of Trust dated December 28, 1972, filed December 29, 1972, under County Clerk's File No. D771070, F.C. 155-26-0904, executed by Crow-Shutt #9, a Texas general partnership, in

favor of Jess Hay, Trustee, securing the payment of the note in the principal amount of \$2,000,000.00, payable as therein provided to the order of THE MUTUAL BENEFIT LIFE INSURANCE COMPANY and additionally secured by a Collateral Assignment of Landlord's Interest in Leases recorded under Clerk's File No. D771069, F.C. 155-26-00.7.

The term. Individual provisions considered in that certain Mer of Agreement Among Tenants in Common as set forth in instrument filed November 16, 1976, under Clerk's File No. E955010, F.C. 153-04-2394.

#### TITLE EXCEPTIONS WITH RESPECT TO TRACTS TWO AND THREE:

- Rights of parties in possession as tenants under recorded or unrecorded leases. (As to Both Tracts).
- 2. The lien for ad valorem taxes for 1979. (As to Both Tracts).
- A 50 foot building set back along the east boundary of the Property adjacent to Greengrass Drive as shown on the map recorded in Volume 142, Page 4 of the Map Records of Harris County, Texas. (As to Both Tracts).
- 4. A 1/16th non-participating royalty interest in and to all of the oil, gas and other minerals on, in, under or that may be produced from the Property, reserved by H. Volmer Niemann in Deed recorded in Volume 3266, Page 580 of the Deed Records of Harris County, Texas. (As to Both Tracts).
- 5. An undivided 1/2 interest in and to all of the oil, gas and other minerals on, in, under or that may be produced from the Property, reserved by Donland Development Company in Deed recorded in Volume 7394. Page 266 of the Deed Records of Barris County, Texas, the surface rights having been waived therein. (As to Both Tracts)
- 6. Deed of Trust dated November 22, 1968, recorded in Volume 6586, Page 609 of the Map Records, executed by Crow-Shutt #8, a partnership in favor of George W. Kesler, Trustee, securing the payment of one note in the principal amount of 8530,000.00, payable as therein provided to the order of The Prudential Insurance Company of America, and additionally secured by an Assignment of Rentals recorded in Volume 2184, Page 418 of the Contract Records and by Assignment of Leases recorded in Volume 2184, Pages 414, 422 & 426 of the Contract Records of Harris County, Texas. (As To Tract Three Only).
- 7. Deed of Trust dated August 4, 1969, recorded in Volume 6872, Page 118 of the Map Records, executed by Crow-Shutt #8, a partnership in favor of Richard Coselli, Trustee, securing the payment of one note in the principal amount of \$835,000.00, payable as therein provided to the order of The Prudential Insurance Company of America, and additionally secured by an Assignment of Rents recorded in Volume 2242, Page 480 of the Contract Records and by Assignment of Leases recorded in Volume 2242, Pages 452, 456, 460, 464, 468, and 476 of the Contract Records. (As to Tract Two Only).
- 8. The terms, conditions and provisions consined in that certain Memorandum of Agreement Among Tenants in Common as set forth in instrument filed November 16, 1976, under Clerk's File No. E955023, F.C. 153-04-2469 and E955013, F.C. 153-04-2411. (As to Both Tracts).

#### TITLE EXCEPTIONS WITH RESPECT TO TRACT FOUR:

- Rights of parties in possession as tenants under recorded of unrecorded leases.
- The lien for ad valorem taxes for 1979.
- Spreme... the state of the property, together with the right to use such easement for waterlines, sewer lines and power lines or other utilities, as granted in instrument from W. H. Francis, Jr., and Reinforced Plastics Co. to Globe Box Company recorded in Volume 3476, Page 381 of the Deed Receipts of Harris County, Texas.
- 4. Drainage easement twenty feet wide along the north boundary of the Property granted to Harris County Flood Control District by Edmond L. Lorrehn and Thos. H. Shartle by institutent recorded in Volume 2444, Page 234, or the Deed Records of Harris County. Texas:
- 5. An easement for a gas pipeline five feet wide over and across the south five of the north twenty-five feet of the Property as granted to United Gas Corporation by Edmond in Lorenn and Thomas E. Shartle in instrument recorded in Volume 2225, Page 341, of the Deed Records of Harris County Texas
- 6. Easement for gas pipelines 5 feet wide along the east boundary of the Property, as granted in instrument from W. H. Francis Jr., to United Gas Corporation recorded in Volume 3476. Page 182 of the Deed Records of Harris County, Texas.
- Railrod spur track across the Property as shown on survey plat of the Property by Shaner Bicks and Cherry Consciting Engineers, Houston, Texas, dated June 22 1973, and resurveyed September 18, 1976.
- 8. An unobstructed easement 10 feet wide at three separate locations on the Property and an unobstructed serial easement 20 feet wide from a plane 20 feet above the ground apward with the same centerline as said 10 foot easements as granted by Crow-Shutt to Houston Lighting & Fower Co. in instrument filed of record in the office of the Jounty Clark of Harris County, Texas, under Clark's File No. D51907c and recorded under F.C. 140-23-1892, of the Official Public Records of Real Property of Harris County, Texas.
- 9. An easement for utilities 10 feet wide, the north boundary of such easement being located 20 feet south o the north boundary of the Property, said easement extending the entire east-west length of the Property, as established by instrument executed by Crow-Shutt and Crow-Shutt #11 filed for record in the office of the County Clerk of marris County, Texas under Clerk's File No. D665509 and recorded under F.C. 148-39-246 of the Official Public Records of Real Property of Harris County, Texas.
- 10. Deed of Trust dated September 27, 1973, recorded under Clerk's File No. D990298, F.C. 168-32-2242, executed by Crow-Shutt #9, a Texas general partnership in favor of Richard Coselli, Trustee, securing the payment of one note in the principal amount of \$1,350,000.00, payable as therein provided to The Prudential Insurance Company of America, and additionally secured by a Conditional Kasignment of Rentals recorded under Clerk's File No. D990296, F.C. 188-32-2135.

THE PERSON NAMED IN

and an Assignment of Leases recorded under Clerk's File No. D990297, F.C. 168-32-2239. UCC Financing Statement filed in conjunction with said Deed of Trust under Clerk's File No. 781766, F.C. 258-68-1251, and refiled on Augut 3. 1978, under Clerk's File No. F708163, F.C. 102-87-1829.

STATE OF TEXAS

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OCT 1 1 1979



COUNTY CLERK, HARRIS COUNTY, TEXAS



E955()11

#### GENERAL WARRANTY DEED

(Property: <u>448-1007</u>)

153-04-2398

THE STATE OF TEXAS §

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF HARRIS

THAT ROBERT T. CROW; TRAMMELL CROW, TRUSTEE FOR THE STUART M. CROW MANAGEMENT TRUST; and ROBERT E. GLAZE

(hereinafter referred to, whether one or more, as "Grantor"), for and in consideration of the sum of Ten Dollars (\$10.00) cash in hand paid and other good and valuable considerations. the receipt and sufficiency of which are hereby acknowledged and confessed, has GRANTED, BARGAINED, SOLD and CONVEYED. and by these presents does GRANT, BARGAIN, SELL and CONVEY, MYKAWA ROAD HOUSTON B.V. a Netherlands corporation (hereinafter referred to as "Grantee"), an undivided sixty percent (60%) interest in and to that certain tract or parcel of land in Harris County, Texas, being more particularly described in Exhibit "A" attached hereto and incorporated by this reference herein, and any and all other property owned or claimed by Seller adjacent thereto, together with an undivided sixty percent (60%) interest in and to the warehouse and all other improvements thereon, all fixtures thereon and therein, all rents relating thereto and all other rights, titles and interests appurtenant thereto (the said undivided <u>sixty</u> percent (60%) interests in and to the aforesaid being hereinafter referred to collectively as the "Property").

This General Warranty Deed and the conveyance hereinabove set forth is executed by Grantor and accepted by Grantee subject to and upon, but only upon, sixty percent (60%) of the outstanding principal balance on that certain Promissory Note described on Exhibit "B" attached hereto and incorporated by this reference herein, and the other matters set forth on said Exhibit "B", to the extent that same are in existence and applicable to the Property (hereinafter referred to collectively as the "Cutstanding Interests").

It is expressly understood and agreed that this is a "subject to" conveyance only, and that Grantee has not, to any extent and in any respect, assumed any liability of any nature under the aforesaid Promissory Note or under the instrument described or Exhibit "B" and the specification but without limitation, by agreement of mon-performance of either the indebtedness evidenced or secured thereby or any other obligation of any party thereto.

TO HAVE AND TO HOLD the Property, together with all and singular the rights and appurtenances thereunto in anywise belonging, unto Frantee, and its successors and assigns,

Forever, and Grantor does hereby bind itself, its successors and assigns, to warrant and forever defend all and singular the title to the Property unto the said Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, subject only to the Outstanding Interests.

153-04-2399

EXECUTED this the gtd day of November 1976.

Undivided Interest Being Conveyed	1 A
20 \$	HOBERT T. CROW , bere supply by and
_20\$	TRAMMENT COOK TRUSTEE FOR THE STUART
	ROBERT E. GLAZE
60 \$	GRANTOR

THE STATE OF TEXAS
COUNTY OF Dellas

BEFORE ME, the undersigned authority, on this day personally appeared ROBERT T. CROW, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, and the capacity therein stated

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 10 day of November, 1976.

RECORDERY MEMORANDUM;
This intercents is not metabolity for photographic recorded do to certain or phino cost, discriminations, or do to floridate. All the best on the control of the best of the control of the intercent or the control of the intercent or the control of the intercent.

Notary Public in and for Nalles County, Texas

My commission expires

June 1, 1977

DEC 9 1977

THE STATE OF TEXAS \$ COUNTY OF Dallas \$

BEFORE ME, the undersigned authority, on this day personally appeared TRAMMELL CROW, the Trustee of THE STUART M. CROW MANAGEMENT TRUST, known to me to be the person and trustee whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity therein stated and as the act and deed of said trust.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 10 day of November, 1976.

Notary Public in and for Dallas County, Texas

My commission expires
DEC 9 1977

THE STATE OF TEXAS 5 CCUNTY OF Dallas 5

BEFORE ME, the undersigned authority, on this day personally appeared ROBERT E. GLAZE, known to me to be the person whose name is subscribed to ment, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the day of November, 1976.

Notary Public in and for Wallas County, Texas

My commission expires June 1, 1977

TV=="

#### DESCRIPTION OF PROPERTY

Property: 448-1007

An 11.498 acre tract of land being out of the Henry B. Prentiss League and being part of that certain tract conveyed to Crow Shutt No. 9 by Deed recorded in Volume 7668, Page 583, Harris County Deed Records, Harris County, Texas, and being more fully described as follows:

BEGINNING at an "X" cut in concrete for the southwest corner of the herein described 11.498 acre tract of land; said point also being the northwest corner of a certain 3.2439 acre tract and being North 0 degrees, 02 minutes East 398.00 feet from the southeast corner of the Chauncey Goodrich Survey, Abstract 306;

THENCE, South 89 degrees, 58 minutes Fast 1244.20 feet to a 1/2 inch iron pipe set at the southeast corner of the herein described 11.498 acre tract, said point also being the northeast corner of a certain 6.334 acre tract, said point also being in the westerly right-of-way line of Mykawa Road;

THENCE, North 13 degrees, 27 minutes West along the Westerly right-of-way line of Mykawa Road, 431.97 feet to a 1/2 inch iron rod found for the northeast corner of the herein described 11.498 acre tract;

THENCE, South 89 degrees, 58 minutes, 39 seconds West 1143.47 feet to a 1/2 inch iron rod found for the northwest corner of the herein described 11.498 acre tract, said point being in the easterly right-of-way line of a Houston Lighting and Power Company 100-foot right-of-way and in the west line of the Henry B. Prentiss League;

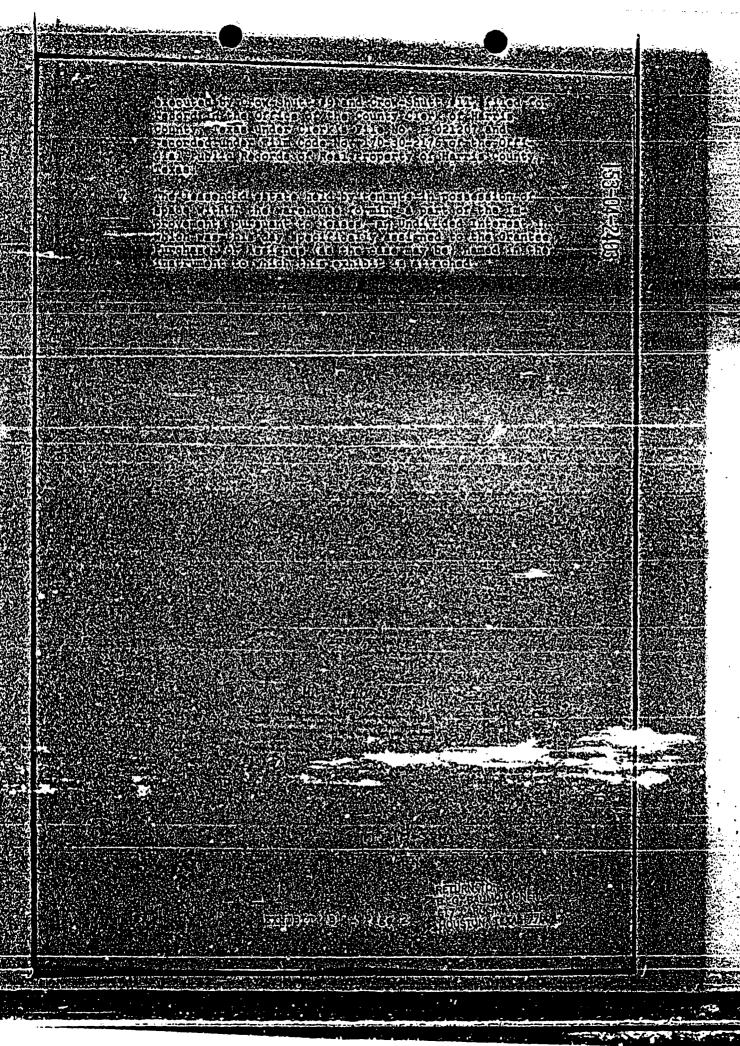
THENCE, South 00 degrees, 00 minutes West along the dommon line of the Houston Lighting and Power Company right-of-way and the herein described 11.498 acre tract, 418.94 feet to the PLACE OF BEGINNING and containing 11.499 acres of land.

#### UTSTANDING INTERESTS

#### Property: 448-1007

- Deed of trust dated December 28, 1972 executed by Crow-Shutt 19, a Texas general partnership, filed for record in the Office of the County Clerk of Harris County, Texas under Clerk's File No. D 771070 and recorded under Film Code No. 155-26-0904 of the Official Public Records of Real Property of Harris County, Texas. securing payment of one certain Deed of Trust Note (the "Mutual Benefit Note") of even date therewith in the original principal amount of \$2,000,000.00, bearing interest at the rate of 9-1/8% per annum, executed by Crow-Shutt 19 payable to the order of The Mutual Benefit Life Insurance Company, with interest only being payable on February 1, 1973 and on the first day of each calendar month thereafter to and including June 1, 1973, and thereafter being payable in consecutive monthly installments of principal and interest in the amount of \$17,316.21 each beginning July 1, 1973, with the balance of all principal and accrued interest thereon being finally due and payable on August 1, 1996.
- 2. Collateral Assignment of Landlord's Interest in Lease(s) dated December 28, 1972, executed by Crow-Shutt #9 in favor of The Mutual Benefit Life Insurance Company, securing payment of the Mutual Benefit Note, said Collateral Assignment of Landlord's Interest in Lease(s) having been filed for record in the Office of the County Clerk of Harris County, Texas under Clerk's File No. D 771069 and recorded under Film Code. No. 155-26-0899 of the Official Public Records of Real Property of Harris County, Texas.
- 3. An easement for sanitary sewer purposes fifteen feet (15') wide along the north boundary of the Property granted to the City of Houston, Texas by Mrs. E. B. Crane in instrument recorded in Volume 2331 at Page 242 of the Deed Records of Harris County, Texas.
- 4. A ten foot (10%) wide water line easement granted to the City of Rouston, Texas by Crow-Shutt #9 in instrument recorded in Volume 8008 at Page 377 of the Desd Records of Harris County, Texas.
- 5. A ten foo. (10°) wide water line easement of the City of Toleral Control washing as a substitution of the Deck ment records of Harris County, Texas.
- 6. A private easement thirty-five feet (35') wide along the southerly boundary of the Property for pedestrian and vehicular passage as described in that certain Dedication of Private Easements dated March 23, 1973

EXHIBIT "B"



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DLED RIGH

vol. 7668 - 553

THE STATE OF CALIFORNIA

KNOW ALL MEN BY THESE PRESENTS:

THAT RRCORS THEATRE. INC., a Texas corporation, acting herein by and rough its duly authorized officers, hereinafter called Grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS (\$10.00) cash and other good and valuable consideration to Grantor paid by CROW-SHUTT #9, a Texas partnership composed of Robert T. Crow, Robert E. Glaze, George A. Shutt and Robert S. Wilson, hereinafter called Grantees, and the further consideration of the execution and delivery by Grantees to Grantor of their certain promissory note described as follows:

One promissory note bearing even date herewith for the principal sum of Five Hundred Eighty-eight Thousand Six Hundred Sixty-eight and 70/100 Dollars (\$588,668.70), executed by Grantees herein and a co-signer, payable to the order of Grantor herein in five (5) equal annual installments of principal of \$117,733.7h each, the first of said installments being due and payable on the fif day of July, 1975, and a like installment of principal being due and payable on the same day of July of tach succeeding calendar year thereafter until said note is paid in full, said note bearing interest from date until maturity at the rate of 64% per annum, payable annually as it accrues, the first installment of interest being due and payable on the 14 day of July, 1970; said note providing for interest at the rate of 10% per annum on all past due principal and interest, for acceleration of maturity at the option of the holder thereof in the event of default in the payment of any installment of interest or principal when due thereon, and for 10% attorney's fees in event said note be placed in the hands of an attorney for collection or be collected by suit or other legal proceedings; said note further providing for certain prepayment privileges and for partial releases with respect to portions of the hereinafter described property under terms and conditions set out therein; the payment of said note being secured by Vendor's Lien hereinafter retained, as well as by the lien of a Deed of Trust of even date herewith from the Grantees herein to William P. Fonville Trustee for holder of said note:

has GRANTED, SOLD and CONVEYED, and by these presents does GRANT, SELL and CONVEY unto CROW-SHUTT #9, a Texas partnership composed of Robert T. Crow, Robert E. Glaze, George A. Shutt and Robert S. Wilson, Grantees herein, the following described property lying and being situated in Harris County, Texas, ta-wit:

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PATALOGITAS.

Ricia vel 7668 - 584

A tract of 22.609 acres of land out of the Henry B. Frentiss League, Abstract No. 56, in Harris County, Texas, described by metes and bounds as follows:

BEGINNING at a one inch iron pipe at the southeast corner of the Tours, said point being in the east line of the Houston Lighting and Power Company 100 foot right-of-way, and in the west line of the Henry B. Prentiss League and marking the southwest corner of this tract:

THENCE north 00°02' east along the east line of the said Houston Lighting and Power Company 100 foot right-of-way and the west line of the said Henry B. Prentiss League, a distance of 816.54 feet to a one inch iron rod for the northwest corner of this tract;

THENCE north 89°58° east along the south line of the Frank N. Hoskins 5 acre tract described in deed recorded Volume 924, Page 430, of the Deed Records of Harris County, Texas, a distance of 1143.41 feet to a 1/2 inch iron rod in the west line of Mykawa Road, based on a width of 80 feet, for the northeast corner of this tract;

THENCE south 13°27' cast along the west line of Mykawa Road, based on a width of 80 feet, a distance of 795.35 feet to a 1/2 inch iron and for the southeast corner of this tract, said point being at the intersection of the west line of said Mykawa Road with the projection in an easterly direction of the north line of Block 37 of EDGEWOOD, SECTION 9, a Subdivision as shown on map recorded Volume 45, Page 65, of the Map Records of Harris County, Texas, said point being also northeast corner of a tract marked "Acreage" on the mentioned map of EDGEWOOD, SECTION 9;

THENCE south 88°06'59" west along the said projection of the north line of said Block 37 of EDGEWOOD, SECTION 9, and along the north line of said block which is also north line of EDGEWOOD, SECTION 9, as shown on the above mentioned map, a distance of 1329.70 feet to the PLACE OF BEGINNING, said tract being the same tract and parcel of land conveyed by O. K. Theatres Corporation to Brooks Theatre, Inc., by deed recorded Volume 5640, Page 46, of the Deed Records of Harris County, Texas, after allowing for the widening of Mykawa Road from a width of 60 feet to 80 feet by a right-of-way deed from Bess Burkett Crane to Harris County, Texas, dated November 29, 1935, recorded Volume 996, Page 624, of the Deed Records of Harris County, Texas, to which deeds reference is here made.

This conveyance is made, executed and delivered by Grantor and accepted by Grantees subject to a sanitary sewer easement along and across and under the north 15 feet of the above described tract and parcel of land, granted to the City of Houston by deed dated September 4, 1951, recorded Volume 2331, Page 242, of the Deed Records of Harris County, Texas.

TO HAVE AND TO HOLD the above described property and premises together with all and singular the rights and appurtenances thereto in anywise belonging,

forever, and Grantor, subject to the easement hereinabove set forth and taxes or the current year, does hereby bind itself and its successors to WARRANT and herebyer Draws of the current year, does hereby bind itself and its successors to WARRANT and herebyer Draws of the current year, does hereby bind itself and its successors to WARRANT and herebyer Draws of the current year, does hereby bind itself and its successors to WARRANT and herebyer Draws of the current year, does hereby bind itself and its successors to WARRANT and herebyer Draws of the current year, does hereby bind itself and its successors to warrant and crantes.

But it is expressly agreed and stipulated that the Vendor's Lien and superior title are retained and reserved by Grantor in, upon and against the above described property and premises until the above described note, both principal and interest, is fully paid, according to its face, tenor, effect and reading, when this deed shall become absolute. It is further agreed and stipulated that foreclosure of the lien of the Deed of Trust additionally recurring the payment of said note, either by exercise of the power of sale contained therein or otherwise, shall also operate as foreclosure of the Vendor's Lien herein retained.

All taxes levied and assessed against the hereinabove described property for the year 1969 have, by agreement of the parties hereto, been promated as of May 1, 1969, and Grantees accept title subject to the taxes for such year.

EXECUTED this 20th day of June, A. D., 1969.

Attest:

BROOKS THEATRE, INC.

10

Secretary

Secretary

By 131.64

"THE STATE OF CALIFORNIA

COURTY OF LOS ANGELES

BEFORE ME, the undersigned authority, on this day personally appeared I. B. ADELMAN, President of Brooks Theatre, Inc., a corporation, known-to-me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed and in the capacity therein stated and as the act and deed of said corporation.

GIVEN under my hand and seal of office, this 26th day of June, A. Dr., 1969.

MURIEL M. HATTON
MOTARY PUBLIC — CALPORMS
PRINCIPAL GETICE IN
LOS ANGELES COUNTY

Notary Public in and for-

LOS ANGELES COUNTY CALIFORNIA

P. G. ECKELS
617 CAROLINE
HOUSTON, TEXAS 77002

· 3′-

A special meeting of the Board of Directors of Brooks ideator, incomparison to varyor of notice, was held at Dallas, exast on June 13, area.

Present were 1, 8, Adelman, Hyman Glickman and Lia A. Rosenbaum, 1, 8, and held and present were 2.

On motion duly made and seconded the following resolution was un immedsly adopted.

RESOLVED, that Brooks Theater, Inc. sell and convey to Crow-Shutt #9, a Texas partnership composed of Robert 7. Crow, Robert E. Glaze, George A. Shutt and Robert S. Wilson, or its nominee, the tract of approximately 22.600 acres of land out of the Henry B. Prentiss League, Abstract No. 56, in Harris County, Texas, owned by the corporation, for and in consideration of the sum of \$738,668.70 (subject to adjustment of 75 cents per square foot for any difference in area) payable at closing partly in cash, and by the exemultion and delivery of a promissory note payable to the order of the corporation in the principal sum of the balance of the purchase price, said promissory note to bear interest at the rate of 6-1/2% per annum payable annually on the anniversary date of the note, said note to be payable in five equal annual installments, the first of which shall be due and payable on July 1, 1975 with like and succeeding installments due and payable on the same day in the same month of each succeeding calendar year thereafter until the note is paid in full, said note to be executed by the said partners and guaranteed by the personal endorsement of Trammel Crow, said note to bear interest from date until maturity at the rate of 6-1/2% per annum payable annually on the anniversary date of the note as it accrues with provision of interest of 10% per annum after maturity, acceleration of maturity at option of holder in the event of default in the payment of principal or interest when due, and for 10% attorneys fee in event said note be placed in

the hands of an attorney for collection or be collected by suit or other legal proceedings, with provision for propayment privilege and for partial release of property securing the payment of the note, the payment of said note to be secured by a vendor's tien a failed by the consider of the property and that I. B. Adelman, president of the comporation be and he is not by authorized on behalf of the comporation to make and consummate such sale and to execute any and all documents, including warranty deed, necessary or appropriate in the premises and to determine and agree to any terms and conditions of prepayment and for release of property from the lien retained on the property and covered by the deed of trust as he shall in the exercise of his discretion and judgment determine to be appropriate.

There being no further business to come before the Board, the meeting

was adjourned...

12. Idelman

Secretary

Jb-3/--111

## Threshhold Limit Values (TLV) for

# SCI Chemical Constituents International Distribution Corporation (Formerly known as AID Warehouse)

Chemical	CAS #	TLV
Benzene	71-43-2	1 ppm
Chloral	75-87-6	-
Chlorobenzene	108-90-7	75 ppm
Dichlorobenzene (m)	541-73-1	<b>-</b>
(0)	95-50-1	50 ppm/300 mg/cubic meter in air
(p)	106-46-7	75 ppm in air
Dichlorophenoxyacetic Acid	94-75-7	10 mg/cubic m
DDT	-	1 mg/cubic m
Diethyl Sulfate	64-67-5	=,,
Dimethyl Sulfate	77-78-1	0.1 ppm
Dimeenji Dullace	77 70 1	(10 ppm IDLH)
Epichlorohydrin	106-89-8	2 ppm in air
Ethylene Dibromide	106-93-4	(200 ppm in air)
Denytene Diblomide	100-93-4	
a-Hydroxyisobutyronitrile	75-86-5	(400 ppm IDLH) 10 ppm
(Isobutyronitrile)	78-82-0	10 ppm
		-
Hydrocyanic Acid	74-90-8	10 ppm in air
Methyl Alcohol	67-56-1	200 ppm in air
Naptha	8030-30-6	Depends on Contents of
<b>3</b>	4605 14 5	Aromatic Hydrocarbons
Paraquat	4685-14-7	0.1 mg/cubic m
Parathion	56-38-2	0.1 mg/cubic m, air
		(20 mg/cubic m IDLH)
Toxaphene	_	500 ug/cubic m (skin)
1,1,1-Trichloroethane	71-55-6	350 ppm in air
1,1,2-Trichloroethane	79-00-5	10 ppm in air
Trimethyl Phosphate	512-56-1	- · · · · · · · · · · · · · · · · · · ·
m-Xylene	108-38-3	100 ppm
o-Xylene	95-47-6	100 ppm
p-Xylene	106-42-3	100 ppm
b wirene	100-42-3	TOO P.F.W.



## INTE OTIONAL DISTRIBUTION CORP. 7198 MYKAWA HOUSTON, TX. 77033 (713) 645-4080



RECEIVED. Subject to the classifications and bentuty filed tariffs in effect on the date of the issue of the Bill of Lading, the property described below in apparent good order except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in

et forth in the classification or tariffs which governs the transportation of this shipment and the said terms and conditions are hereby agr  MERGENCY PHONE CHEMTREC				conditions of the said bill of lading, including those on the back thereof, sed to by the Shipper and accepted for himself and his assigns.  LEGEND  1 DOT PROPER SHIPPING NAME 2 GENERIC NAME					
If the Shipment moves between two ports by a carrier's or shipper's weight." NOTE - where the rining the agreed or declared value of the proper!  The fibre boxes, berrels, drums, carboys, cans, shipment conform to the specifications set forth in hereon, and all other requirements of the classific ansiporation of this shipment.  Mail or street address of consignee - For purp	rate is dependent on value, shippers ally.  Deper bags, pails or tubs used for this is box and drummaker's certificate astion or tariff which governs the	he bill of lading shall state whether it is re required to state specifically in "Shipper's imprint in lieu of stam part of bill of lading approved by partment of Transportation."	3 DO 4 HA 5 HA the De 7 FRE	T HAZARD CLASS ZARDOUS CONTAIN ZARDOUS PLACARI EIGHT CLASSIFICAT EIGHT CLASSIFICAT NA NUMBER	O ION CODE	IPTION			
C.O.D. SHIPMENT	C.O.D. Amt	Collection ees _		Total Charges		_			
Tance	MO DAY YR CHECKED BY		AY YR CARRIER/ROUTE						
CONSIGNED OREG	ON/CALIFORNIA ON/CALIFORNIA 4 MEADOWVIEW F TION CITY, OR.	CHEM. VERBAL/I	ioug	u 	PR	6572 INT DATE 1/23/87			
5 DRUMS OF TILLA	M CONTAINS: 3	55 GAL. DRUMS, 1	30 GAL. & 36	1 GAL PA	ILS.				
PACKAGES H/M	ESCRIPTION (DO NOT ABBREVIA	ATE) RELEASE VALUE	LOT NUMBER	FREIGHT	LOCATION	(SUB TO COM			
l 1	HEMICALS HEMICALS		TILLAM	ATE 0000		1040C 200C			
	8%	lowers/							
ITAL FIECES 3	5047 (0m)		ITAL GROSS WT			12400			
BANT FREIGHT BILL TO: 'EGON/CALIFORNIA' '454 MEADOWVIEW R	D	area 1 of acceptance of acceptance but	1 THIS IS TO CE	TITIFY THAY THE ABOVE SCRIBED PACKAGED, MAINTON VICE THANSPORE ATTOMS OF THE DEPARTMENT OF THE PROPERTY OF THE	MANTO MATE AND AND TION ACCOUNT MENTO TOOM TOO TOOM	BALS ARE PROPERLY ISELED, AND AND IN IDURA SO OTHE AP- SPORTA JOHN AP- Quired Placards.			

(Signature of Consignor.)

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		•		I.D.C. IN	VENTORY I	REFORT						
	2			MOUNT VÈ	RNON TRAI	de Grou	i P	•				
			,	THEODER	04/30/38							
FRODUCT ID	LOO NUMBER	PKG CD	NETZGROSS	RUFZIAT	E LAST I	FAL.	И	OUT	NEW FAL	STROE RIE	AMOUNT FUE	
1000	AMONTO SURFAC.	5501	400/ 400			1		•	` 1			
1000	-ATLOX 3404F	5501	400/ 400			1			1			
1000	-BOLLER WTR CONTR	5501	400/ 400			Ó			5			
1000	PULK TANK	5501	"400/ 400			1			Î			· • · ·
1000	CHILORAL.	5501	400/ 400			â			á			
1000	CRYSTAL INHURITO	5501	400/ 400			ő			ä			
1000	-DUT (DRZAN-A)	5501	400/ 400			""			7			••
1000	DICHLOROFONZENE	5501	400/ 400	•		4			Δ		4	
1000	DIETHYL SULFATE	5501	400/ 400			15			15			,
4×150	-ISOBUTYRONITRILE	5501	400/ 400	•		13			13		~	
. )	- METHYLPYROPHOSPH	5501	400/ 400			4			3,3			
ivoó	MIXED DRUM	5501	400/ 400			1 .						
1000 1000		550t	400/ 400				•					
1000	FHENOXYALETTC AC	550t	400/ 400		•	•						
1000	TERGITOL	5501										
1000	TOXAPHENE.	5501	400/ 400 400/ 400									
1000	- TRICHLOROETHANE	5501	400/ 400			4						
1000	-TRIMETHYL FROSTH	5501	400/ 400									
	- TRADICAL PROPERTY							· · · · · · · · · · · · · · · · · · ·	<b>*</b>			
TOTALS FOR MI	ISC. CHEMICALS	Ţ	ORM. 55 GAL.	S/DR NET=	27200	68	()	0	<b>6</b> 8	0.8000/EA	54.40	
	41. Mary A. Allendary 1100											
1000	-BENZENE	5514	400/ 400			6			6		•	
1000	~ EPICHLOROHYDRIN	5514	400/ 400			3			1			
1000	METHANOL.	5514	400/ 400		•	13			8			
1000	- PETRO, NAPTHA	5514	400/ 400			1			1			
1000	→ XYLENE	5514	400/ 400			8						
TOTALS FOR FL	LAMMARILE CHEMICALS	I	ORM 55/GA.DE	(-HAZ NET=	9600	24	O	0	24	1.6000/FA	38,40	
			*** - 24 0660 vete 1884 1884 - ber bust oppy rebe end 2 800		e emperando sello della segli a latti di si	92 hl	ı					
TUTALS FOR AC	ст		•			••					92.80	
TOTAL AMOUNT	DUE (MININUM 25.00)										92.80	
TOTEPL PROCNAT	BOC. CHICAMACH SEDACON		•								78.400	
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### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI 1445 ROSS AVENUE, SUITE 1200 DALLAS, TEXAS 75202

REPLY TO: 6E-ES

### **MEMORANDUM**

SUBJECT: After Action Report - I.D.C. (formerly A International Distribution

Warehouse), Houston, Harris County, Texas

FROM:

Charles A. Gazda

Chief

Emergency Response Branch (6E-E)

T0:

Larry D. Wright

Chief

Superfund Enforcement Branch (6H-E)

Attached is the On-Scene Coordinator's After Action Report for the removal action taken at the subject site.

By copy of this memorandum, I am also forwarding a copy of the After Action Report to the Emergency Response Division Director in Headquarters. Please call Ragan Broyles or David Dodgen (OSC) of my staff if you have any questions regarding this report.

cc: Timothy Fields (WH-548B) Karen Argain (WH-548B) I.D.C. (A.I.D.) Warehouse/Site #K2
Houston, Harris County, Texas

After Action Report

February 27, 1989

David Dodgen On-Scene Coordinator Date

## TABLE OF CONTENTS

#### I. SUMMARY OF EVENTS

- A. Cause of the Incident
- B. Initial Situation
- C. Responsible Parties
- D. Organization of the Response
- E. Resources Committed
- F. Comments of the Effect on Natural Resources
- Threat Abatement Action

## II. EFFECTIVENESS OF REMOVAL ACTION

- A. Action Taken by the Responsible PartyB. Action Taken by Other Groups

### III. PROBLEMS ENCOUNTERED

I. Summary of Events

### A. Cause of the Incident

Ninety-one drums were abandoned at the I.D.C. (formerly known as A.I.D.) Warehouse, containing various chemical wastes and products. The chemicals in the drums included pesticides and pesticide formulation products. Because of the deteriorating condition of some of the drums there was a significant threat to warehouse workers and the surrounding population.

### B. Initial Situation

The I.D.C. Warehouse is located at 7198 Mykawa Road in Houston, Harris County, Texas. The facility is located in a predominately residential district.

The drums of chemicals were placed in the AID Warehouse in Houston, Texas in March 1986 by Conservation Services, Inc. (CSI) and its sister company SIGNO. CSI/SIGNO placed the drums in the AID warehouse while attempting to obtain an export permit for the chemicals. CSI/SIGNO was unable to export the chemicals and abandoned the drums of hazardous materials. AID later contacted Texas Water Commision(TWC) for assistance in removing the drums. TWC notified ERB Region 6 of the hazardous nature of the drums contents and the deteriorating drum conditions.

The ninety-one drums were obtained by CSI/SIGNO from Colorado Organic Chemical Company (COCO). The drums were obtained in 1984 as part of a Region 8 enforcement action against COCO. Initially, 127 drums of product were obtained by CSI/SIGNO and moved to Houston by rail and truck where they were overpacked and stored in a warehouse owned by Global South Port Warehouse. CSI/SIGNO relocated the entire 127 drums to the AID warehouse in 1986 as a result of complaints filed with TWC by the owner of Global South Port Warehouse. At the time of the relocation, CSI/SIGNO was attempting to obtain an export permit for the products. CSI/SIGNO sold thirty-one drums of chemicals to Oregon California Chemicals from the AID warehouse facility. However, ninety-one drums of chemicals were ultimately abandoned at the AID warehouse.

After receipt of the TWC referral on the abandoned drums of waste at the AID warehouse, EPA initiated a site investigation on May 19, 1988. The EPA TAT contractor inventoried and photo-documented the drums and performed air monitoring in the warehouse. As a result of this site investigation, the EPA ERB determined that the abandoned drums posed on imminent health threat and initiated a removal action.

C. Responsible Parties

The original owner of the abandoned chemicals was SCI/SIGNO, however, because the company is defunct and the owners are serving jail sentences, and therefore are not a viable party. —EPA issued an Administrative Order on June 22, 1988, to I.D.C. Warehouse. IDC warehouse assumed responsibility for the clean-up on 6/22/88, and completed disposing of the 91 drums 11/16/88.

D. Organization of the Response

I.D.C. Warehouse assumed responsibility for the removal of the drums. The following is a list of participants for this removal action:

Environmental Protection Agency - David Dodgen, OSC

Ecology and Environment, Inc. (TAT) - Richard Yeager

- I.D.C. WarehouseDouglas Walt, President
- E. Resources committed:

EPA costs

As of 3/1/89 the total TAT cost for oversight of the IDC removal was \$3,550.53. The TAT was responsible for overseeing the drum removal. The EPA costs were \$6,928.

F. Comments On the Effect On Natural Resources

There were no adverse effects on natural resources which required clean-up action.

G. Threat Abatement Action

On November 16,1988, the I.D.C. Warehouse transported 84 drums as hazardous waste. The waste was shipped to the following disposal facilities: 59 drums to Technical Environmental Service of La Porte, Texas; 16 drums to Heat Energy Advanced Technology in Dallas, Texas; 5 drums to EMPAK, Inc., in Deer Park, Texas; and 4 drums to Marine Shale Processors, Inc., in Morgan City, Louisiana. All drums were overpacked prior to shipment. TAT photodocumented the removal of the drums from the warehouse and loading of the trucks.

Additionally, on November 16, 1988, 7 drums containing ORZAN-A were disposed of as non-hazardous material by I.D.C. Warehouse. The drums containing the ORZAN-A were initially thought to contain DDT, however sampling by the Texas Department of Agriculture indicated that DDT was not present.

Effectiveness of Removal

A. Action Taken By the Responsible Party

The removal of the drums from the warehouse on November 16, 1988 was coordinated by I.D.C. Warehouse. The removal effectively eliminated the imminent and substantial threat at the warehouse.

B. Action Taken by Other Groups

The ERB supervised this removal action. The removal of the drums met EPA criteria established in the Administrative Order.

Problems Encountered

There were no significant problems encountered during this removal action.

4	

RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionField Trip  Conference Other(Specify)						
TO: Antonio Amors	From:	Date:					
Environmental Specialist Houston Health Department,	Raymond Wayne, FIT Hydrologist Raymond Wayne	3/13/89					
Houston, TX (713) 640-4399		10:10 am					
SUBJECT: AID Warehouse	- PA (TXD987966066)						
SUMMARY OF COMMUNICATION	N						
Mr. Amors conducted an	off-site reconnaissance of the site	on 3/10/89.					
The warehouse was entire	ely active (1/2 of warehouse rented	by United					
Parcel Service) and is	for sale. The facility did not appea	ar to be					
hazardous.							
The Health Department ha	as no records on the facility.						
		N8					
CONCLUSIONS, ACTION TAKEN OR REQUIRED							
INFORMATION COPIES TO:							

•			
RECORD OF COMMUNICATION	x Phone Call	f Item Checked Below)DiscussionFielOther(Specify)	d Trip
T0: Jay Swindle Engineer, Solid and Hazardous Waste Section Houston Health Dept. Houston, TX (713) 640-4399	From: Raymond Wayn Raymond V	Date: 3/9/89 Time: 3:15 pm	
SUBJECT: AID Warehouse	- PA (TXD9879	66066)	
SUMMARY OF COMMUNICATION	J		
He checked his files (in	ncluding the r	ecent site file) and h	as no record
of the facility.			
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CONCLUSIONS, ACTION TAKE	EN OR REQUIRED		····
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INFORMATION COPIES TO:		· · · · · · · · · · · · · · · · · · ·	

RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionField Trip  ConferenceOther(Specify)				
TO: Jim Taylor	From:	Date:			
Engineer, Harris County Pollution Control Dept.	Raymond Wayne, FIT Hydrol	3/9/89			
Pasadena, TX	Raymond Wayne	Time:			
(713) 920–2831	· yand to ayas	2:05 pm			
SUBJECT: AID Warehouse	- PA (TXD987966066)				
SUMMARY OF COMMUNICATION					
There is no record of the	e facility in their files.				
		And the second s			
		<del> </del>			
CONCLUSIONS, ACTION TAKE	N OR REQUIRED				
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			Reference 8
RECORD OF COMMUNICATION (713) 479-5981	x Phone Call	f Item Checked Below)DiscussionFielOther(Specify)	d Trip
TO: Susan Ripley Field Investigator Hazardous Waste	From: Raymon FIT Hy Ray	d Wayne drologist mond Wayne	Date: 3/9/89
Sec., TWC Deer Park, Texas			Time: 2:40 p.m.
SUBJECT AID Warehouse	- PA (TXD98796	6066)	
SUMMARY OF COMMUNICATION	N		
o Ann Hallford (secreta	ary) checked t	he files and did not f	ind any record
of the facility. Sus	san did not re	call hearing of the si	te.
o Susan said there was	a recent repo	rt (since 3/6/89) of 8	drums being
found in a ditch at	the 12,000 blo	ck of Mykawa Road. Th	ė drums
were reported to be u	unlabeled and	leaking substance into	the water.
The substance appeare	ed to be paint	-like, but no samples	were collected.
		<del></del>	
		***************************************	
		and the second s	<del></del>
CONCLUSIONS, ACTION TAKE	EN OR REQUIRED		
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RECORD OF COMMUNICATION	x Phone Call	f Item Checked BelowDiscussionFiOther(Specify)		,
TO: Sandra Cantu Clerk, Central Records Texas Water Commission	From:	e, FIT Hydrologist	Date:	3/9/89
Austin, TX (512) 463-8562	Raymond	· · · · · · · · · · · · · · · · · · ·	Time:	1:30 pm
SUBJECT: AID Warehouse	- PA (TXD9879	66066)		
SUMMARY OF COMMUNICATION	J			
She checked the Texas Wa	ater Commissio	n central files for	the site	and
found no record of the f	faciity.			
Her files are current as	s of 2/89.		<del></del>	V., L.
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CONCLUSIONS, ACTION TAKE				
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Re	fe	re	n	ce

RECORD OF	(Record of Item Checked Below)  x Phone CallDiscussionField Trip					
COMMUNICATION	ConferenceOthe	r(Specify)				
TO: Don Renchie Pesticide Enforcement Coordinator, Pesticide	From:		Date: 3/9/89			
Enforcement Division, Texas Department of Agriculture, Austin, TX (512) 463-7552	Raymond Wayne, FIT Raymond Wayne		Time:			
SUBJECT: AID Warehouse	- PA (TXD987966066)					
SUMMARY OF COMMUNICATION						
There is no record of the	e facility in their f	iles. They pe	rformed a			
computer search of their	records.					
All sellers or distribut	ors of pesticides are	required to r	egister each			
year (registration expi	es 12/31). Exception	s to registrat	ion:			
1) Volume greater than	16 ounces.					
2) Volume greater than	1 gallon if less tha	n 10% active i	ngredients by			
volume.	**************************************					
3) Substance shipped	o another of the comp	any's faciliti	es.			
1						
		·	* ***			
CONCLUSIONS, ACTION TAKE	N OR REQUIRED					
INFORMATION COPIES			,			



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

HOUSTON BRANCH 6608 HORNWOOD DRIVE HOUSTON TEXAS 77074

Date: DE	CEMBER 1, 1987
Subject:	RCRA Compliance Inspection Report
From:	Diana G. Ayers, Chief  Houston Branch (6E-H)
To:	Bill Taylor, Chief Enforcement Section (6H-CE)
Thru:	Richard Gigger, Chief Compliance Monitoring Section (6E-HC)
Attn:	Linda Thompson (6H-CE)
Environment you for you Inspection	ned RCRA inspection report has been prepared and reviewed by neal Services Division personnel. This report is being forwarded to our information and action.  n Dates: November 30, 1987 acility: A INTERNATIONAL DISTRIBUTION EPA ID Number: NOWE
Facility !	Mailing Address: 71 89 MYKAWA State: TA ZIP Code:
	Location: SAME State: TX ZIP Code:
	Owner: DOUG WALT - PRESIDENT Phone Number: (713)445-4080
Description	on of Facility: WAREHouse
Type of Ov	vnership:FederalStateCountyMunicipal \( \sqrt{Private} \)
Did facili	ty request a copy of the report? YES NO V
HW Activit	cies: Generator Transporter Treatment Disposal Storage
Type of In	aspection: Lead Overview SPMS Commitment
Land Ban	
Cas	se Development / RFA Operation and Maintenance
EPA 1	n Participants: (name and phone number) Inspector(s) Sue FREYTAG
	Inspector(s) PAULA THETFORD - TWC DEERPARK
Facil	ity Representative(s) Dou6 WALT
Checklists	Completed: (indicate number of each checklist attached)
Generat	
TSD	LOIS Groundwater Biological Treatment
Tanks	Waste Piles CME Generator Supplement
Contain	
Landfil	
Transpo	orter Incinerator Surface Impoundment Other NARRATIVE
Apparent V	iolations noted during outbriefing (If applicable): See attached

Houston, Texas 2) Delta Trading Warehouse 5534 Amour Dr. Houston, Texas 1) The inspectors arrived at AID warehouse and met Mr. Doug Walt, president, at about 2:15 pm., and explained the intent of the investigation. Mr. Walt knew of the drums containing hazardous waste and that they were still in the warehouse. Original contact with the Mt. Vernon Group was with Mr. Burt White, who was looking for a temporary storage location for the drums which were at the Delta Trading Warehouse and the Consolidated Bonded Warehouse. In the past year, TWC-Deer Park, has sampled six drums. Two of the samples were analyzed by the Texas Department of Agriculture to determine the quality of the chemicals for possible use (attachment 1). Results showed that some contaminates were mixed with the chlorobenzilate. AID has been working with a broker, Tom Powers of Texas Pride, to . find a buyer for the chemicals. This has netted a few potential buyers, but no sales have been transacted. At the time of the inspection, drums were being prepared to be removed by a buyer. However, the sale had fallen through shortly before the inspectors arrived. Mr. Walt is concerned about the status of the drums and any EPA action. The drums are stored in one corner of the warehouse, but they could still be a threat to his employees. Mr. Walt indicated that some drums associated with the Mt. Vernon Group are being stored at Central Preight Lines and Alamo Express warehouses in Houston. Observations on the drums: a) All drums are still in the warehouse. b) One drum had a corroded lid. c) Strong vapors were noted in the area of a few drums. These drums appeared to be in good condition. d) No leaks were detected. In a telephone conversation with Doug Walt on December 7, 1987, he said that the recently failed sale of drums had gone through on Friday December 4, 1987. The sale included 26 drums of chlorobenzilate and five drums of tillam. Tom Powers, who had been "given" the drums by AID, arranged the sale and collected profits from the transaction. The buyer for the chemicals is Oregon California Chemicals at 29454 Meadowview Road in Junction City, Oregon.

On November 30, 1987, Paula Thetford of Deer-Park, accompanied Sue Freytag, EPA-Houston Branch, on two warehouse inspections. The

(713)645-4080

1) A-International Distribution. Inc. (AID)

warehouses inspected were:

7198 Mykawa

2) The inspectors arrived at 5534 Armour Dr. at 3:40 pm. The occupants at this address are now the Mantua Manufacturing Company. Company representatives in the office did not know anything about the previous occupants, the Delta Trading Warehouse. The manager, Rich Lender, knew of the company, but was not in the office.

On December 4, 1987, Sue Freytag called Rich Lender to ask if any drums had been left at the building when Delta Trading moved out. He said one transformer had been left behind. The transformer was removed by the new owner of Delta Trading, Global Southport Services, Inc. of 10077 Wallisville Road, Houston.

5 F

Jourse,

Ref: MT Vernor Frode

Landy with Departente Commission Called

Of 6 samples taken 2 were analysed

Results from agreealtime Signt are:

1— 91% Chlorobenzilate

6% Chlorobenzilate

2— 75% Chlorobenzilate

5.9% Chlorobenzilate

6% Chlorobenzilate

Appears the broker Tom Process wonts to

Purchase the approx 23-26 drums of

above product. You and the Powers

Should try to get in confact with each

whier regarding this.

Clyde @ Dept of agriculture wants to

make sure on legality of four Silling

product (as legality of possession of

Product) but don't let this hold up

wheneve to Soll if you are sure on the

legality. The sale must be accepted

a ok'd by Dept of Agriculture before

finalized. You might want to Sull if

Possible of even project of give. Thr. Powers — if he will take — the balance of Stock just to get rid of and not have to dispose of.

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## A.I.D. INFINITE REPORT

## MOUNT VERNON TRAJE GROUP

### THROUGH 05/31/84

PRODUCT ID	LOT NUMBER	PKG CD	NETZGROSS	REFZDATE I	AST FAL.	ΤN .	CUT	MPW 파이	STREE RTF	ANDUNT THE
1000	AMONTO SURFAC.	5501	400/ 400		€ .			•		
1000	ATLOX 3404F	5501	400/ 400		<b>,</b> , ,			3		
1000	BOTLER WIR CONTR	5501	400/ 400	•	3;			2		
1000	FULK TANK	5501	400/ 400		ţ	•		1		
1000	CHI.ORAL	550 t	400/ 400		8			В		
1000	CHLOROPENZULATE	5501	400/ 400		. 26			26		
1000	CRYSTAL INHIBITO	550 t	400/ 400		2	•		2:		
1000	DDT (ORZAN-A)	5501	400/ 400		7			フ		
1000	DICHLOROBENZENE	550 t	400/ 400		4			4		
1000	DJETHYL SULFATE	5501	400/ 400		15			15		
.000	TSOBUTYRONTTRILE	550 t	400/ 400		1.3			1.3		
1000	METHYL PYROPHOSPH	5501	400/ 400		3			3		
1000	MIXED DRUM	550 t	400/ 400		1			į.		
1000	DEGANTO PHOSPHAT	5501	4007 400		1			1		
1000	FHENOXYALETTC AC	550 t	400/ 400		t			Į.		
1000	TERGITOL.	5501	4007 400		1					
1000	TILLAM	55Q t	4007 400		5			:5		
1000	TOXAPHENE	550t	400/ 400	•	6			6		
1000	TRICHLOROETHANE	550 t	400/ 400		τ.			Į.		
1000	TRIMETHY PHOSPH	5501	4007 400		2			2		
TOTALS FOR MISC.	CHEMICALS	J)	RM. 55 GAL S	70R NET= 398	500 99	ņ	O	99	0.8000/EA	79.20
1000	BENZENE	5514	400/ 400		6			ó		
1000	EPICHLOROHYDRIN	5514	4007 400		1			1		
1000	METHANOL.	5514	400/ 400		Ŕ			á		
1000	PETRO. NAPTHA	5514	4007 400		1		ť	í		
1000	XYLENE	5514	400/ 400		ล์			ล์		•
TOTALS FOR FLAMM	ARLE CHEMICALS	T.	RM 55/GA.TR-	-HAZ NET≕ 90	500 24	O	0	24	1,60007F4	38,40

TOTALS FOR ACCT

TOTAL AMOUNT DUE (MINIMUM 25.00)

317.60

117.60

•	

RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionField Trip  ConferenceOther(Specify)					
To: David Dodgen On-Scene Coordinator Emergency Response Division, U.S. EPA, Dallas, TX	From: Raymond Wayne, FIT Hydrologist Roymond Wayne	Date: 4/18/89 Time:				
(214) 655–2270		3:40 pm				
SUBJECT: AID Warehouse	- PA (TXD987966066)					
SUMMARY OF COMMUNICATION	1					
He was On-Scene Coordina	ator for the AID Warehouse drum remo	val.				
The public could walk up	o to the building (no site barriers	preventing				
access) but the warehous	se completely enclosed the drums. Wa	arehouse				
doors (lockable) secured	the building, roof and windows are	intact, and the				
warehouse floor is conci	cete.					
The facility is active.	The drums were stored in a remote	section of the				
warehouse, but there wer	re no barriers to prevent workers fro	om contacting				
the drums.						
The drums were over-pack	ked and did not appear to have any lo	eaks. There				
were no stains on the co	oncrete floor by the drums which wou	ld indicate				
leakage from the drums.						
CONCLUSIONS, ACTION TAKE	EN OR REQUIRED					
INFORMATION COPIES						

	•	Reference 13
RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionFie  ConferenceOther(Specify)	ld Trip
T0: Allan Mueller Assistant Field Supervisor, Ecological Services U.S. Fish & Wildlife Service Houston, TX (713) 750-1700	From:  Raymond Wayne, FIT Hydrologist  Raymond Wayne	Date: 4/19/89 Time: 9:30 am
SUBJECT: AID Warehouse	- PA (TXD987966066)	
SUMMARY OF COMMUNICATION	N	
There are no critical ha	abitats for Federally listed endange	ered species
within 4 miles of the s	ite, or 1 stream mile downstream of	the site.
There could be wetlands	and sensitive environment within 1	5 stream miles
downstream of the site.	I would have to come to his office	e and check maps.
·		
CONCLUSIONS, ACTION TAK	EN OR REQUIRED	

INFORMATION COPIES

TO:

Reference	1

RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionField Trip  ConferenceOther(Specify)		
TO: Ed Ranzau Hydrologist, Surface Water Division, U.S. Geological Survey Houston, Texas (713) 750-1655	From: Raymond Wayne, FIT Hydrologist Raymond Wayne	Date: 4/19/89	
		Time: 10:55 am	
SUBJECT: AID Warehouse -	- PA (TXD987966066)		
SUMMARY OF COMMUNICATION	1		
For Water Year 1987 (10/	/1/86 to 9/30/87):		
Sims Bayou			
1) At Hiram Clark Stree	et, Houston (19.7 miles upstream of	Buffalo Bayou)	
Mean Daily: 52.4 cfs	s; Max.: 1,450 cfs; Min.: 8.1 cfs.		
2) At Houston (7 miles	upstream of Buffalo Bayou)		
Mean Daily: 168 cfs;	; Max.: 3,720 cfs; Min.: 30 cfs.		
Buffalo Bayou			
At Piney Point, Texas (25 miles upstream of Sims Bayou)			
Mean Daily: 390 cfs; Max.: 1,890 cfs; Min.: 50 cfs.			
CONCLUSIONS, ACTION TAKEN OR REQUIRED			
INFORMATION COPIES TO:			

			Reference 15
RECORD OF COMMUNICATION	(Record of Ite x Phone Call D Conference 0	<del></del>	d Trip
TO: Tom Buckingham Assistant Section Chief	From:		Date: 4-19-89
Water Rights Administration Section Texas Water Commission Austin, Texas (512) 463-8240	Raymond Wayne, F Raymond Wa		Time: 2:10 pm
SUBJECT: AID Warehouse -	PA (TXD987966066)		
SUMMARY OF COMMUNICATION	I		
All surface water extrac	tions in Texas hav	e to be permitted	by his office.
There are no extraction	permits for Sims B	ayou downstream o	f where site
runoff would enter the b	payou.		
There is one extraction	permit on Buffalo	Bayou between Sim	s Bayou and
15 miles downstream of t	he site. The perm	it is issued to H	ouston
Power and Light (Deep Wa	iter Plant). The w	ater is used for	cooling
purposes during power ge	eneration.	<del></del>	
		The state of the s	
			11.44
CONCLUSIONS, ACTION TAKE	N OR REQUIRED		
		<del></del>	

INFORMATION COPIES

TO:

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RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionFiel  ConferenceOther(Specify)	d Trip
TO: Billy Risinger Section Chief, Meter Reading Section, City	From: Raymond Wayne, FIT Hydrologist	Date: 4-19-89
of Houston Water Dept., Houston, TX (713) 224-6231 Ext 236	Raymord Wayne	Time: 4:25 pm
SUBJECT: AID Warehouse	- PA (TXD987966066)	
SUMMARY OF COMMUNICATION	V	
The city has 380,000 act	tive water connections.	
The Water Dept. extends	service to the entire area within 4	miles of the
site. No law requires o	domestic well owners to hook-up to t	he municipal
drinking water supply sy	stem.	
,		
		·
CONCLUSIONS, ACTION TAKEN OR REQUIRED		
INFORMATION COPIES TO:		

	<u> </u>	
RECORD OF COMMUNICATION	(Record of Item Checked Be x Phone CallDiscussion ConferenceOther(Specify	Field Trip
T0: Kathlie Sheu Engineer, Ground Water Section, Public Works Dept., City of Houston, Houston, Texas (713) 247-3352	From:  Raymond Wayne, FIT Hydrologi  Raymond Wayne	Date: 3-28-89 Time: 2:40 pm
SUBJECT: AID Warehouse	- PA (TXD987966066)	
SUMMARY OF COMMUNICATION	N	
There are seven city was	ter wells (drinking water) with	nin four miles of
the site. She will send	d me a map showing well location	ons and screened
intervals for the wells.	•	
All seven city wells are	e interconnected with the city	water supply
system.		
	MATERIAL TO A STATE OF THE STAT	
	***************************************	
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1	· · · · · · · · · · · · · · · · · · ·	
CONCLUSIONS, ACTION TAKE	EN OR REQUIRED	
		,
INFORMATION COPIES		



BELLIFORT. WELL 1800GPM 8902 COMALI 3CREEN BECTION

> 655' - 680' 755' - 790' 800' - 800' 860' - 870' 905' - 935' 1005' - 1085' 1170' - 1035' 1015' - 1050'





EASTEND #4 WELL 18006PM 3839 OLD GALVESTON RP. 3CREEN SECTION 1/00' - 1199' 1035' - 1090' 1565' - 1585' 1685' - 1080' 2090' - 2100' 2395' - 2350' 2510' - 2620'



FASTEND # 3 WELL 19004PM

2320 CENTRAL AVE. 3CREEN SECTION

1195' - 1245'

1265' - 1275'

1320' - 1340'

1375' - 1410'

14 95

1570', - 1610'

1630' - 1680'

1875' - 1885'

2005', - 2075'

2250' - 2280'

2305' - 2345'



HOBBY AIRPORT. 1200GPM 8049 TELEPHONE SCREEN SECTEON 835 820 ' 915 .940' 1095' 1140 1160 1195 1260' 1280 1305' 1330 1380' 1350 1500 1590' 1615 1665 1690'

17451

1830

1710'

1805'



30UTH PARK #5 WELL 1850GPM 8430 MYKAWA RD. 3CREEN SECTEON 195' - 835' 895' - 965'

> 1010' - 1050' 1130' - 1155' 1180' - 1195' 1285' - 1315' 1370' - 1415'

> 1540 - 1550

1680' - 1915' 1935' - 1965'

1820' - 1840



SOUTH PARK #4 Well 1295 GPM. 8003 MYKAWA PD.

SCREEN SECTION

995' - 1000'

1183' - 1010'

10701 - 1090'

1350' - 1370'

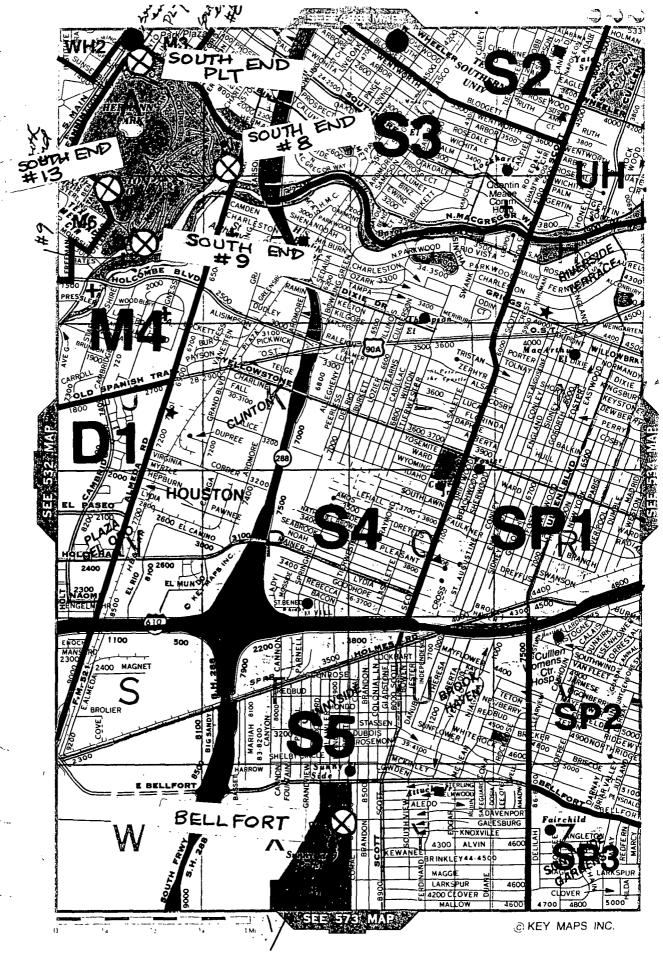
1030' - 1025'

1545' - 1575'

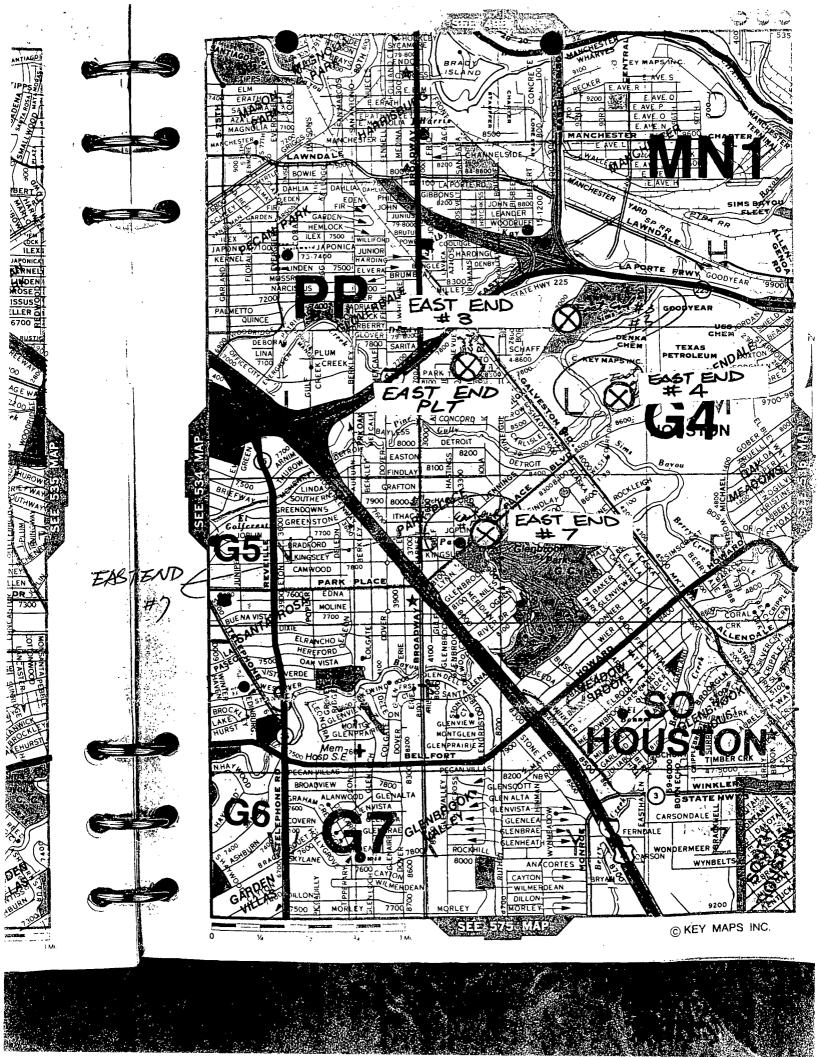
1695' - 1705'

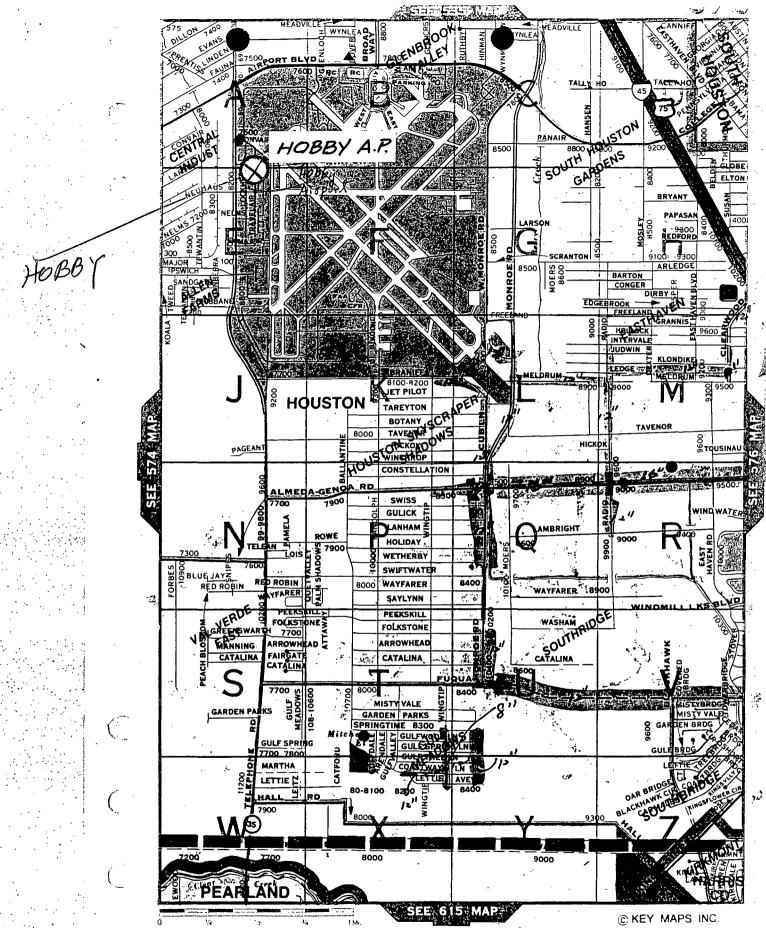
1740' - 1805'

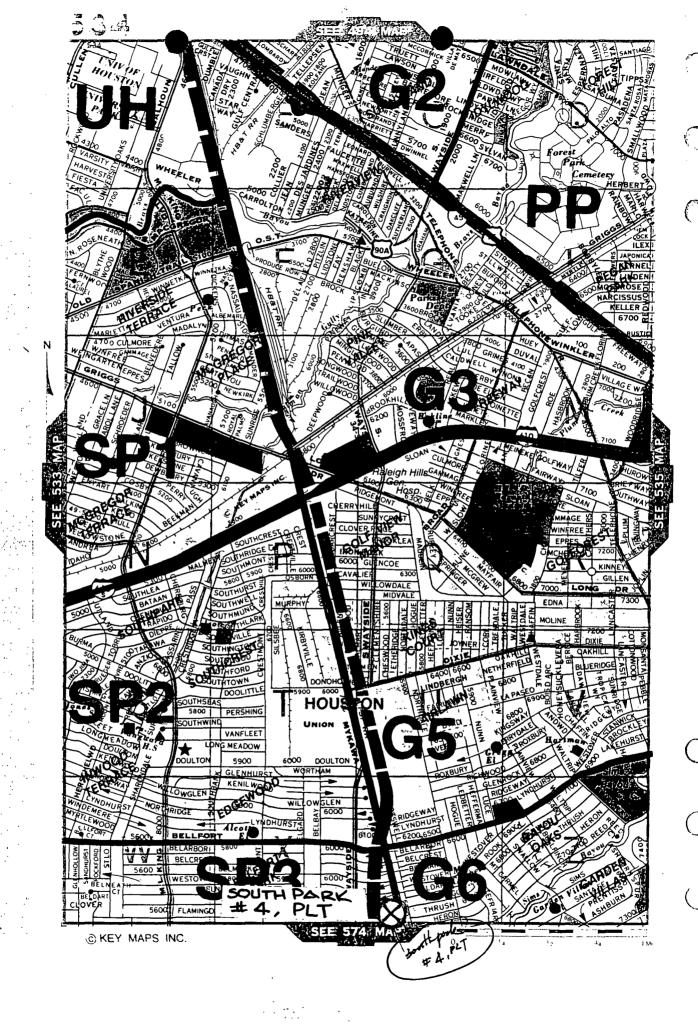
1790' - 1805'



BELLHORT







BOUTHPARK #3 HIGGINS TO SIMS WAS BAYERD STOOL OF THE STOO 6000 RUE H AIRPOSELVO ES COCK CANTERWAY Sterling Aeorodynamics ELINSKY BANGE BOTANY TAVENOR Z Ross Sterling Sr 6200 MADDEN BUNGALOW FAIRGREE CARSON 6200 6100 HOUSTON OLE. OREM 00.271 WILLARDVILLE RD 6600 6200 E LINCOLD DARE

A SEPTIMENT 5000 5200 13000 WAYSIDE HOWE RD. ALLISON RD ALLISON DUNWICH PERTH 8 5300 E PVT DUNWICH 4600 FUQUA COTTINGHAM SCHURMIER 5500 800 6100 SCHURMIER 4700 4900 Private 5400 S KE CARTER CARTER HARRIS 4600 **智見**でOKSIDE COUNTY NE VILLAGE © KEY MAPS INC.

in the second

RECORD OF (Record of Item Checked Below)  x Phone CallDiscussionField Trip  ConferenceOther(Specify)							
TO: David Myers District	From:	Date: 4-19-89 Time: 3:40 pm					
Conservationist U.S. Soil Conservation Service, Houston, TX (713) 855-8716	Raymond Wayne, FIT Hydrologist Raymond Wayne						
SUBJECT: AID Warehouse	- PA (TXD987966066)						
SUMMARY OF COMMUNICATION	N						
No crop land within 4 mi	iles of the site.						
No aquaculture within 1	5 downstream miles of the site.						
There might be small poo	ckets of cattle grazing land 3 to 5	miles south					
of the site.							
No boating on Sims Bayou	u (flow is mostly sewage effluent).	Some fishing					
in Buffalo Bayou section	n of pathway. Buffalo Bayou is an i	ndustrial					
river.							
	·						
·							
CONCLUSIONS, ACTION TAKE	EN OR REQUIRED						
INFORMATION COPIES TO:							

EPA FORM 1300-6 (7-72)

Replaces EPA HQ Form 5300-3 which may be used until Supply is Exhausted.

RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionFiel ConferenceOther(Specify)	d Trip		
TO: Dana Barbie Section Chief, Ground Water and Subsidence	From: Raymond Wayne, FIT Hydrologist	Date: 4-20-89		
Section U.S. Geological Survey, Houston, Texas (713) 750-1670	Raymond Wayne	Time: 8:55 am		
SUBJECT: AID Warehouse	- PA (TXD987966066)			
SUMMARY OF COMMUNICATION	N			
The Chicot aquifer exter	nds from the water table depth (175	to 200 feet		
below land surface) to a	approximately 600 to 700 feet below	sea level near		
the site. The Evangelin	ne aquifer extends from the base of	the Chicot		
to between 2,000 to 2,50	00 feet below sea level.			
The transmissivity of th	ne Chicot and Evangeline are both 6,	000 to 9,000		
feet squared per day.				
The site is not in a red	charge area of the Chicot. The Beau	mont clay		
extends from land surfac	ce to between 15 and 20 feet below 1	and surface.		
More than half the unsat	turated zone is clay.			
The Chicot is comprised	of interfingered sand and clay and	is		
hydrologically connected	d to the Evangeline aquifer. No hyd	rologic barrier		
between aquifers, differ	rence in hydraulic conductivity and	water chemistry.		
No discontinuities withi	in 4 miles of the site. There are s	alt domes, but		
the resulting faults hav	ve little vertical movement.			
CONCLUSIONS, ACTION TAKE	EN OR REQUIRED			
	_			
INFORMATION COPIES TO:				

EPA FORM 1300-6 (7-72) Replaces EPA HQ Form 5300-3 which may be used until Supply is Exhausted.

## Uncontrolled Hazardous Waste Site Ranking System

A Users Manual (HW-10)

Originally Published in the July 16, 1982, Federal Register

United States Environmental Protection Agency

# Properties of Industrial Materials

Sixth Edition

### N. IRVING SAX

Assisted by:

Benjamin Feiner/Joseph J. Fitzgerald/Thomas J. Haley/Elizabeth K. Weisburger

SYNS:

DIMETHYLACETIC ACID ISOPROPYLFORMIC ACID

2-METHYLPROPANOIC ACID 2-METHYLPROPIONIC ACID

ALPHA-METHYLPROPIONIC ACID

TOXICITY DATA: skn-rbt 139 ug/24H open orl-rat LD50:280 mg/kg skn-rbt LD50:500 mg/kg 3-2 CODEN:

AIHAAP 23,95,62 AIHAAP 23,95,62 AIHAAP 23,95,62

Toxicology Review: AMIHAB 21,100,60. DOT: Corrosive Material, Label: Corrosive FEREAC 41,57018,76. Reported in EPA TSCA Inventory, 1980. EPA TSCA 8(a) Preliminary Assessment Information Proposed Rule FERREAC 45,13646,80.

THR: HIGH via orl and MOD via dermal routes. A skn irr in rbt.

Fire Hazard: Mod, when exposed to heat or flame; can react with oxidizing materials.

To Fight Fire: Alcohol foam, CO2, dry chemical.

#### ISOBUTYRIC ACID, BENZYL ESTER

CAS RN: 103286 NIOSH #: NQ 4550000 mf: C₁₁H₁₄O₂; mw: 178.25

SYNS:

BENZYL ISOBUTYRATE

BENZYL-2-METHYL PROPIONATE

TOXICITY DATA: orl-rat LD50:2850 mg/kg

2 FCTXAV 11,1023,73

Reported in EPA TSCA Inventory, 1980.

THR: MOD orl. See also esters.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

#### ISOBUTYRIC ANHYDRIDE

CAS RN: 97723 NIOSH #: NQ 5550000

mf: C₈H₁₄O₃; mw: 158.22

Liquid, decomp in water. bp: 360°F, d: 0.951-0.956 @ 20°/20°, vap. d: 5.5, flash p: 139°F, autoign. temp.: 665°F.

**TOXICITY DATA:** 3

DOT: Corrosive Material, Label: Corrosive FEREAC

Reported in EPA TSCA Inventory, 1980. EPA TSCA 8(a) Preliminary Assessment Information Proposed Rule FERREAC 45,13646,80.

THR: HIGH irr to skin, eyes and mu mem.

Fire Hazard: Mod, when exposed to heat, flame, oxidizers. To Fight Fire: Alcohol foam, fog, dry chemical, CO₂.

#### **ISOBUTYRONITRILE**

CAS RN: 78820 NIOSH #: TZ 4900000 mf: C₄H₇N; mw: 69.12

Colorless liquid, slightly sol in water, very sol in alcohol and ether. flash p: 46.4°F. d: 0.773 @ 20°/20°, bp: 107°, mp:  $-75^{\circ}$ .

SYNS

ISOPROPYL CYANIDE

2-METHYLPROPIONITRUE

#### TOXICITY DATA: 3-2-1 CODEN:

UCDS** 10/29/59 skn-rbt 380 mg open MLD UCDS** 10/29/59 ori-rat LD50: 102 mg/kg ihl-rat LCLo: 1000 ppm/4H **AIHAAP 23,95,62** AIHAAP 23,95,62 skn-rbt LD50:310 mg/kg AIPTAK 5,161,1899 scu-rbt LDLo:9 mg/kg AIPTAK 5,161,1899 scu-frg LDLo:4800 mg/kg

Occupational Exposure to Nitriles recm std: Air: TWA 22 mg/m3 NTIS**. Reported in EPA TSCA Inventory, 1980. EPA TSCA 8(a) Preliminary Assessment Information Proposed Rule FERREAC 45,13646,80. THR: HIGH orl, skn, scu. MOD ihl; LOW scu. See also nitriles.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_r.

#### 8-ISOBUTYRYL-3-METHYL-3,8-**DIAZABICYCLO(3.2.1)OCTANE**

NIOSH #: HM 0463000 CAS RN: 57269371  $mf: C_{11}H_{20}N_2O; mw: 196.33$ 

3 CODEN: TOXICITY DATA: RPOBAR 2,205,70 orl-mus LD50:250 mg/kg **RPOBAR 2,194,70** ipr-mus LD50:200 mg/kg

THR: HIGH orl. ipr.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_x.

#### **ISOCAINE**

NIOSH #: TN 3325000 CAS RN: 533288 mf: C₁₆N₂₃NO₂•ClH; mw: 297.86

#### SYNS:

O-AMINOBENZOYL DI(ISOPRO-PYLAMINO)ETHANOL HYDRO-CHLORIDE

3-BENZOXY-1-(2-METHYLPIPERI-DINO)PROPANE HYDROCHLO-RIDE

DL-3-BENZOXY-1-(2-METHYLPI-PERIDINO)PROPANE HYDRO-CHLORIDE

BENZOYL-GAMMA-(2-METHYLPI-PERIDINE)-PROPANOL HYDRO-CHLORIDE

3-(2-METHYLPIPERIDINO)PROPYL BENZOATE HYDROCHLORIDE

DL-(2-METHYLPIPERIDINO)PRO-PYL BENZOATE HYDROCHLO-RIDE

GAMMA-(2-METHYLPIPERIDINO) PROPYL BENZOATE HYDRO-CHLORIDE

(+-)-GAMMA-(2-METHYLPIPERI-DYL)PROPYL BENZOATE HY-DROCHLORIDE

METHYCAINE HYDROCHLORIDE NEOTHESIN HYDROCHLORIDE PIPEROCAINE HYDROCHLORIDE

#### 3-2 CODEN: TOXICITY DATA:

ipr-rat LD50:120 mg/kg ivn-rat LD50:20 mg/kg scu-mus LD50:589 mg/kg ivn-mus LD50:22 mg/kg scu-cat LDLo: 200 mg/kg scu-rbt LDLo:300 mg/kg ivn-rbt LD50:28 mg/kg isp-rbt LDLo: 10 mg/kg

JLCMAK 15,731,30 12VXA5 8,839,68 JACSAT 68,2592,46 JACSAT 68,2592.46 JPETAB 24,167,25 JPETAB 24,167,25 JLCMAK 15,731,30 JPETAB 57,221,36

THR: HIGH ipr, ivn, scu, isp; MOD scu. Disaster Hazard: When heated to decomp it emits very tox fumes of NO_x and HCl.

#### ISOCAMPHYL CYCLOHEXANOL (MIXED **ISOMERS**)

NIOSH #: GW 0878000

#### 2602 TOMAYMYCIN

SYNS:

LYCOPERSICIN ALPHA-TOMATINE TOMATIDINE GLYCOSIDE

TOXICITY DATA:

3-2 CODEN:

orl-rat LD50:900 mg/kg TXAPA9 3,39,61 orl-mus LD50:500 mg/kg FCTXAV 17,61,79 ipr-mus LD50:32 mg/kg RCOCB8 12,657,75 ivn-mus LD50:18 mg/kg TXAPA9 3,39,61

THR: HIGH ivn, ipr. MOD orl.

Disaster Hazard: When heated to decomp it emits tox fumes of  $NO_x$ .

TOMAYMYCIN

CAS RN: 35050556

NIOSH #: UY 8533000

mf:  $C_{16}H_{20}N_2O_4$ ; mw: 304.38

Produced by Steptomyces Achromogenes var. Tomaymyceticus (85ERAY 2,1303,78)

SYN: 5H-PYRROLO(2,2-C)(1,4)BENZODIAZEPIN-5-ONE, 2-ETHYLI-DENE-1,2,3,10,11,11a-HEXAHYDRO-8-HYDROXY-7,11-DIMETHOXY-

TOXICITY DATA:

3

dnd-mam:lym 400 umol/L ipr-mus LD50:3 mg/kg

BBACAQ 475,521,77 85ERAY 2,1303,78

THR: MUT data. HIGH ipr.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_x.

TONKA ABSOLUTE

NIOSH #: XW 1830000

Main constitutent is coumarin, found in seeds of fruit of tree dipteyx odorata (FCTXAV 12,807,74)

**TOXICITY DATA:** 

CODEN:

skn-mus 500 mg skn-rbt 500 mg/24H orl-rat LD50:1380 mg/kg

FCTXAV 12,807,74 FCTXAV 12,807,74 FCTXAV 12,807,74

THR: MOD orl. A skn irr. See also coumarin.

**TOPAZ** 

CAS RN: 1302596

NIOSH #: XW 2800000

White powder; colored crystals.

SYNS:

ALUMINUM HEXAFLUOROSILI-

FLUOSILICATE DE ALUMINUM

CATE

TOXICITY DATA:

(FRENCH)

orl-gpg LDLo:5000 mg/kg scu-gpg LDLo:4000 mg/kg CODEN: AMSSAQ 400,5,63 AMSSAQ 400,5,63

Toxicology Review: AMSSAQ 400,5,63. Reported in EPA TSCA Inventory, 1980.

1

THR: LOW orl, scu. See also fluorosilicates.

Disaster Hazard: When heated to decomp it emits tox fumes of F-.

TOPOCAINE HYDROCHLORIDE

CAS RN: 537611

NIOSH #: DG 5775000

mf: C₂₂H₃₃NO₃•ClH; mw: 396.02

SYNS:

P-CYCLOHEXYLOXYBENZOIC ACID-3-(2-METHYLPIPERIDI-NO)PROPYL ESTER HYDRO-

CHLORIDE

N-(3-HYDROXYPROPYL)PIPE-COLINE HYDROCHLORIDE P-CYCLOHEXYLOXYBENZOIC ACID ESTER

3-(2-METHYLPIPERIDINO)PRO-PYL-P-(CYCLO-HEXYLOXY) BENZOATE HYDROCHLORIDE SURFACAINE HYDROCHLORIDE -SURFATHESIN HYDROCHLORIDE

TOXICITY DATA:

orl-rat LD50:2340 mg/kg scu-mus LD50:447 mg/kg ivn-mus LD50:54 mg/kg

3-2 CODEN: 29ZVAB -,37,69 JACSAT 68,2592,46

JACSAT 68,2592,46

THR: HIGH ivn; MOD orl, scu.

Disaster Hazard: When heated to decomp it emits very tox fumes of HCl and NO_x.

N-alpha-TOSYL-L-LYSYL-CHLOROMETHYLKETONE

CAS RN: 2364876

NIOSH #: XT 5150000

mf: C₁₄H₂₁ClN₂O₃S; mw: 332.7

BENZENESULFONAMIDE, N-(5-AMINO-1-(CHLOROACETYL)

PENTYL)-4-METHYL-, (S)- (9CI) TOSYLLYSINE CHLOROMETHYL

TOSYL-L-LYSINE CHLORO-METHYL KETONE TOSYLLYSYL CHLOROMETHYL KETONE

KETONE

TOXICITY DATA: 3

ipr-mus LD50:59 mg/kg scu-mus LD50:64 mg/kg ipr-mus TDLo:280 mg/kg (28D pre)

ivg-mus TDLo:280 mg/kg (28D pre)

**DCTODJ 3,227,80 DCTODJ 3,227,80** JPMSAE 70,60,81 JPMSAE 70,60,81

CODEN:

THR: HIGH ipr, scu. See also ketones.

Disaster Hazard: When heated to decomp it emits very tox fumes of Cl⁻, NO_x and SO_x.

TOXAPHENE

CAS RN: 8001352

NIOSH #: XW 5250000

mf: C₁₀H₁₀Cl₈; mw: 413.80

Yellow, waxy solid, pleasant piney odor. mp: 65°-90°. Almost insol in water; very sol in aromatic hydrocarbons.

SYNS:

CHLORINATED CAMPHENE **CHLOROCAMPHENE** ENT 9,735

NCI-C00259 **OCTACHLOROCAMPHENE** 

POLYCHLORCAMPHENE POLYCHLORINATED CAMPHENES POLYCHLOROCAMPHENE TOXAFEEN (DUTCH)

TOXICITY DATA:

orl-rat TDLo:96 mg/kg (7-22D preg) orl-rat TDLo: 150 mg/kg (7-16D preg) orl-rat TDLo:250 mg/kg (7-16D preg) skn-mam 500 mg MOD

mmo-sat 500 ug/plate mma-sat 500 ug/plate

orl-rat TDLo:30 gm/kg/80W-C:ETA

orl-mus TDLo:6600 mg/kg/80W-C:CAR orl-mus TD:13 gm/kg/80W-C:CAR

ori-hmn LDLo:40 mg/kg unk-man LDLo:44 mg/kg TOXAPHEN (GERMAN) CODEN:

JPFCD2 B15.365,80 BECTA6 15,660,76 BECTA6 15,660,76 JAMAAP 149,1135,52 SCIEAS 205,591,79 SCIEAS 205,591,79 NCITR* NCI-CG-TR-

37,79

NCITR* NCI-CG-TR-37,79 NCITR* NCI-CG-TR-

37,79 CMEP** -.1.56 85DCAI 2,73,70 orl-rat LD50:40 mg/kg skn-rat LD50:600 mg/kg ipr-rat LDL0:70 mg/kg orl-mus LD50:112 mg/kg ihl-mus LCL0:2000 mg/m3/2H ipr-mus LD50:47 mg/kg orl-dog LD50:15 mg/kg orl-rbt LDL0:780 mg/kg skn-rbt LD50:1025 mg/kg orl-gg LD50:250 mg/kg orl-ham LD50:200 mg/kg orl-dck LD50:71 mg/kg

SPEADM 74-1,-,74 SPEADM 74-1,-,74 BECTA6 19,47,78 SPEADM 74-1,-,74 JAMAAP 149,1135,52 JAFCAU 25,1394,77 SPEADM 74-1,-,74 GUCHAZ 6,507,73 JEENAI 46,702,53 85DPAN -,-,71/76 TXAPA9 48,A192,79 TXAPA9 22,556,72

Aquatic Toxicity Rating: TLm96: under 1 ppm WQCHM* 4,-,74.

Carcinogenic Determination: Animal Positive IARC** 20,327,79.

TLV: Air: 0.5 mg/m3 (skin) DTLVS* 4,79,80. Toxicology Review: ANAEA3 35,165,75; DTTIAF 80(20),485,73; RREVAH 56,107,75. OSHA Standard: Air: TWA 500 ug/m3 (skin) (SCP-F) FEREAC 39,23540,74. DOTORM-A, Label: None FEREAC 41,57018,76. NCI Carcinogenesis Bioassay Completed; Results Positive: Mouse (NCITR* NCI-CG-TR-37,79); Results Indefinite: Rat (NCITR* NCI-CG-TR-37,79). "NIOSH Manual of Analytical Methods" VOL 2 S67.

THR: MUT data. A skn irr. An exper CARC, ETA. HIGH hmn orl and man unk HIGH orl, ipr, ihl. MOD skn. Not recommended for use in dairy barns or on milking animals. Can cause mild irr and be absorbed through skn. Causes CNS stimulation with tremors, convulsions, death. Liver injury has been reported.

A pesticide. The Food and Drug Administration (1955) proposes a tolerance of 7 ppm for residues on fruits and vegetables. Tox and, in some instances, lethal amounts of toxaphene can enter the body through the mouth, lungs and skin. Systemic absorption of the insecticide is increased by the presence of digestible oils, and liquid preparations of the insecticide which penetrate the skin more readily than do dusts and wettable powders. A tox mixture of organochlorine pesticides stored to some extent in body fat. It resembles chlordane and, to some extent, camphor in its physiological action. It causes diffuse stimulation of the brain and spinal cord resulting in generalized convulsions of a tonic or clonic character. Death usually results from respiratory failure. Detoxification appears to occur in the liver.

Dangerous Acute and Chronic Dose: The lethal oral dose for man is estimated to be 2-7 g, a toxicity of about four times that of DDT. Toxaphene causes moderate irr on the skin but little or no sensitization. At least seven human deaths have been reported due to toxaphene, all in children. Two families have been made ill by eating vegetables containing a large residue of toxaphene.

Signs and Symptoms of Poisoning: The symptoms are excitement followed by epileptiform convulsions associated with depression; these symptoms are aggravated by external stimuli. Death usually results from respiratory failure and may occur as early as 4 hrs and as late as 24 hrs after poisoning. In calves, sheep, and goats, internal hemorrhage and high temps have been

reported, the latter also being one of the symptoms of camphor poisoning in man.

Pathology: Degenerative changes in the liver parenchyma and renal tubules were reported in laboratory animals chronically receiving toxaphene.

Treatment of Poisoning: The stomach and intestinal tract should be evacuated. Oily laxatives should be avoided. Contaminated clothing should be removed and contaminated areas should be scrubbed with soap and water. Anticonvulsant drugs (bromides, barbiturates, etc.) should be administered. Sodium phenobarbital is the drug of choice to prevent convulsions, and sodium pentobarbitol is best to control those already in evidence. Dosages may have to be quite high in the presence of poisoning in order to control symptoms but should not be high enough to interfere with continuous sleep.

Disaster Hazard: When heated to decomp it emits tox fumes of Cl⁻.

For further information see Vol. 1, No. 8 and Vol. 2, No. 2 of *DPIM Report*.

#### TOXIFERINE DICHLORIDE

CAS RN: 6696588 NIOSH #: XW 5500000

mf: C₄₀H₄₆N₄O₂•2Cl; mw: 685.80

Sol in water. Crystals.

SYN: c-toxiferine 1

TOXICITY DATA: 3 CODEN: ivn-mky LD50:8900 ng/kg ims-mky LD50:18 ug/kg TXAPA9 35,107,76 ims-gpg LD50:14 ug/kg TXAPA9 35,107,76

THR: HIGH ivn, ims. A poison.

Disaster Hazard: When heated to decomp it emits very tox fumes of  $NO_x$  and  $Cl^-$ .

#### **TOXIN HT 2**

CAS RN: 26934-87-2 NIOSH #: YD 0050000 mf: C₂₁H₃₂O₆; mw: 412.53

SYN: 12,13-epoxy-trichothec-9-ene-3-alpha,15-tetrol 15-acetate. 8-isovalerate

TOXICITY DATA: 3 CODEN: orl-ckn LD50:7220 ug/kg AEMIDF 35,636,78

THR: HIGH orl.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

#### **TPA-20-ACETATE**

NIOSH #: GZ 0597000

mf: C₃₈H₅₇O₉; mw: 657.95

TOXICITY DATA: CODEN: skn-mus 39 ng MLD CCSUDL 2,11,78

THR: A skn irr.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

•		Reference 22
RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionFie ConferenceOther(Specify)	ld Trip
T0: Petty Hunter Superintendent City of Houston Parks Department, Houston, TX (713) 845-1019	From: Raymond Wayne, FIT Hydrologist Raymond Wayne	Date: 4-20-89 Time: 2:50 pm
SUBJECT: AID Warehouse	- PA (TXD987966066)	
SUMMARY OF COMMUNICATION	I	- Call West
There are no recreations	al uses (fishing, boating, swimming	) within 15
downstream miles of the	site. Buffalo Bayou is an industr	ial use river.
There are no recreation	structures or improvement within 1	5 downstream miles
of the site.		
CONCLUSIONS, ACTION TAKE	N OR REQUIRED	

INFORMATION COPIES TO:

EPA FORM 1300-6 (7-72)

Replaces EPA HQ Form 5300-3 which may be used until Supply is Exhausted.

RECORD OF COMMUNICATION	(Record of Item Checked Below)  x Phone CallDiscussionFig  Conference Other(Specify)	
TO: Al Calloway Executive Assistant to Harris County Commissioner (Precinct 1) El Franco Lee	From:  Raymond Wayne, FIT Hydrologist  Raymond Waynl	Date: 4-20-89 Time:
Houston, Texas (713) 221-5000		3:50 pm
SUBJECT: AID Warehouse -	- PA (TXD987966066)	
SUMMARY OF COMMUNICATION	<b>1</b>	
No recreational use of	the surface water pathway for 15 do	wnstream miles.
No recreational structur	es or improvements for 15 downstre	eam miles of
the site.		
Buffalo Bayou is an indu	ustrial river.	
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CONCLUSIONS, ACTION TAKE	EN OR REQUIRED	· · · · · · · · · · · · · · · · · · ·
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INFORMATION COPIES TO:		

EPA FORM 1300-6 (7-72) Replaces EPA HQ Form 5300-3 which may be used until Supply is Exhausted.

r.							
RECORD OF Phone Call Discussion Field Trip Communication Conference Other(Specify)							
TO: David Dodgen On-Scene Coordinator, Emergency Response Division U.S. EPA, Dallas, TX (214) 655-2270	From: Raymond Wayne, FIT Hydrologist Raymond Wayne	Date: 4-21-89 Time: 8:45 am					
SUBJECT: AID Warehouse -	- PA (TXD987966066)						
SUMMARY OF COMMUNICATION	N						
There are approximately	20 employees on-site on a regular	basis.					
Halder on the State of the Stat		Commence of the second of the					
	·						
CONCLUSIONS, ACTION TAKE	EN OR REQUIRED						
INFORMATION COPIES TO:							

EPA FORM 1300-6 (7-72) Replaces EPA HQ Form 5300-3 which may be used until Supply is Exhausted.

RECORD OF COMMUNICATION	x Phone Call	f Item CheckedDiscussionOther(Speci	Field	d Trip		
TO: John L. Jones Recreation Superintendent	From:	ne, FIT Hydrolo	ogist	Date: 4-21-89		
Edgewood Park City of Houston Parks	Roymone	Time:				
Department Houston, Texas (713) 734-8434				11:50 am		
SUBJECT: AID Warehouse	- PA (TXD98796	6066)		L		
SUMMARY OF COMMUNICATION	V					
There are just single fa	amily homes be	tween Selinsky	Road an	d Interstate 610		
near the site.		···				
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CONCLUSIONS, ACTION TAKE	N OR REQUIRED					
CONOBOLINE, NOTION TIME			<del></del>			
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INFORMATION COPIES TO:				77.4.4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1		

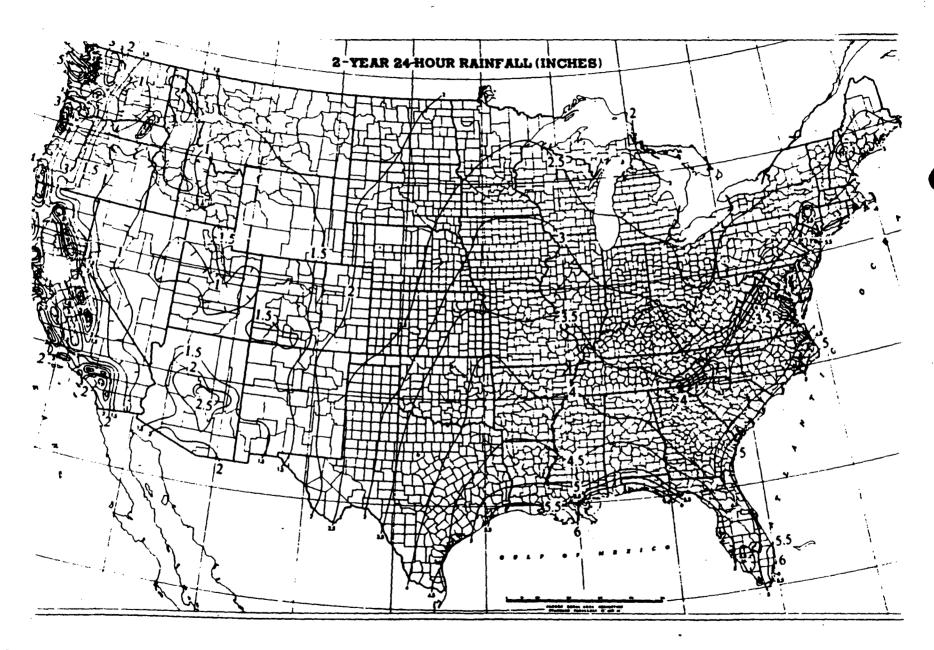
Fire Protection Guide
on
Hazardous Materials
8th Edition



National Fire Protection Association Batterymarch Park Quincy, MA 02269

	FLASH IGNITION		W	SEE INTRODUCT EXTINGUISHING METHODS	IDE	IDENTIFICATON						
	POINT °F(°C)	TEMP. °F(°C)	Lower	Upper	(Water = 1)	(Ab = 1)	POINT F(°C)	Water Soluble		Health	Flamma bility	- Reac- tivity
Dodecyl Benzene (Crude) C ₆ H ₅ C _{1.2} H ₂₅ (Alkane) (Detergent Alkylate)	285				0.9		554-770 (290-410)	No	2	1	1	0
Dodecyl Bromide	See Laury	yl Bromide.										
Dodecylene (α) C ₁₆ H ₂₁ CH:CH ₂ (1—Dodecene)	<212 (<100)	491 (255)			0.76	5.81	406 (208)			0	1	0
Dodecyl Mercaptan	See i-C	odecanethiol.										
tert—Dodecyl Mercaptan C _{1.2} H ₂₅ SH	20.5 (96) (oc)				0.9		428-451 (220-233)	No		2	1	0
4—Dodecyloxy—2—Hydroxy- Benzophenone C ₂₅ H ₃₄ O ₃	498 (254)	715 (379)	100 (43)					No	2		1	0
		Aelting point	109 (43).									
Dodecyl Phenol C ₁₂ H ₂₅ C ₆ H ₄ OH	325 (163) (oc)				0.9	9.0	597-633 (314-334)	No	2	0	ī	0
Dypnone C ₆ H ₅ COCH:C(CH ₃ )C ₆ H ₅ (1, 3—Diphenyl—2— Buten—1—one)	350 (177) (oc)				1.1		475 (246) @ 50 mm	Slight	2 5	1	1	0
Elcosane C ₂₀ H ₄₂	>212 (>100)	450 (232)			0.79	9.75	651 (344)				1	0
Epichlorohydrin CH ₂ CHOCH ₂ CI	88 (31) ( <b>oc)</b>	772 {411}	3.8	21.0	1.2	3.2	239 (115)	Yes	5	3	2	2
(2—Chloropropylene Oxide) (γ—Chloropropylene Oxide)	Note: Se	e Hazardous	Chemicals	Data.								
1, 2—Epoxyethane	See Ethy	lene Oxide.							·	· · · · · · · ·		
Erythrene	See 1, 3	-Butadiene.										
Ethanai	See Acet	aldehyde.										
Ethane CH ₃ CH ₃	Gas	882 (472)	3.0	12.5		1.0	- 128 (-89)	No	6	1	4	0
1, 2—Ethanedial	See Ethy	lene Glycol.										
1, 2—Ethanedial Diformate HCOOCH ₂ CH ₂ OOCH (Ethylene Formate) (Glycol Diformate)	200 (93) (oc)				1.2		345 (174)	Decom- poses			2 ecompose ater.	0 s in
Ethanethial	See Ethy	l Mercaptan.			·							
Ethanoic Acid	See Acet	ic Acid.										
Ethanoic Anhydride	See Acet	ic Anhydride.										
Ethanol	See Ethy	l Alcohol.		_			•					
Ethanolamine NH ₂ CH ₂ CH ₂ OH (2—Amino Ethanol) (β—Aminoethyl Alcohol)	185 (85)	770 (410)			1.0+	2.1	342 (172)	Yes	5	2	2	0
Ethanoyi Chloride	See Acet	yi Chloride.								<del></del>		
Ethene	See Ethy	lene.				<del></del>						
Ethenyl Ethanoate	See Viny	Acetate.										
Ethenyloxyethene	See Divi	nyl Ether.										
Ether	See Ethy	·										
Ethine	See Acei						<del> </del>					
Ethoxyacetylene	<20		·		0.8	2.4	124 (51)	No	1	2	3	1





Herschfield, D.M., 1961, Rainfall Frequency Atlas of the United States. U.S. Weather Bureau Technical Paper No. 40.